MEPS HC-016I:
Appendix to MEPS 1997 Event Files
HC-016A - HC-016H

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

Table of Contents

A. Data Use Agreement

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

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.

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 18 U.S.C. 1001 and is punishable by a fine of up to $10,000 or up to 5 years in prison.

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

B. Background

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

MEPS is conducted to provide nationally representative estimates of health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian noninstitutionalized population. MEPS also includes a nationally representative survey of nursing homes and their residents. MEPS is cosponsored by the Agency for Healthcare Research and Quality (AHRQ) (formerly the Agency for Health Care Policy and Research (AHCPR)) and the National Center for Health Statistics (NCHS).

MEPS comprises four component surveys: the Household Component (HC), the Medical Provider Component (MPC), the Insurance Component (IC), and the Nursing Home Component (NHC). The HC is the core survey, and it forms the basis for the MPC sample and part of the IC sample. The separate NHC sample supplements the other MEPS components. 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. The National Medical Expenditure Survey (NMES-2) was conducted in 1987. Beginning in 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 accommodate these goals, new MEPS design features include linkage with the National Health Interview Survey (NHIS), from which the sampling frame for the MEPS HC is drawn, and continuous 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 noninstitutionalized population, collects medical expenditure data at both the person and household levels. The HC collects detailed

data on demographic characteristics, health conditions, health status, use of medical care services, charges and payments, access to care, satisfaction with care, health insurance coverage, income, and employment.

The HC uses an overlapping panel design in which data are collected through a preliminary contact followed by a series of five rounds of interviews over a 2½-year period. Using computer-assisted personal interviewing (CAPI) technology, data on medical expenditures and use for 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, conducted by NCHS. NHIS provides a nationally representative sample of the U.S. civilian noninstitutionalized population, with oversampling of Hispanics and blacks.

2.0   Medical Provider Component

The MEPS MPC supplements and validates 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 hospitals, hospital physicians, home health agencies, and pharmacies reported in the HC. Also included in the MPC are all office-based physicians who:

- were identified by the household respondent as providing care for HC respondents receiving Medicaid.

- were selected through a 75-percent sample of HC households receiving care through an HMO (health maintenance organization) or managed care plan.

- were selected through a 25-percent sample of the remaining HC households.

Data are collected on medical and financial characteristics of medical and pharmacy events reported by HC respondents, including:

- Diagnoses coded according to ICD-9-CM (9th Revision, International Classification of Diseases) and DSM-IV (Fourth Edition, *Diagnostic and Statistical Manual of Mental Disorders*).

- Physician procedure codes classified by CPT-4 (Common Procedure Terminology, Version 4).

- Inpatient stay codes classified by DRGs (diagnosis-related groups).

- Prescriptions coded by national drug code (NDC), medication name, strength, and quantity dispensed.

- Charges, payments, and the reasons for any difference between charges and payments.

The MPC is conducted through telephone interviews and mailed survey materials. In some instances, providers sent medical and billing records which were abstracted into the survey instruments.

3.0   Insurance Component

The MEPS IC collects data on health insurance plans obtained through employers, unions, and other sources of private health insurance. 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 four 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 Bureau of the Census.

- An Internal Revenue Service list of the self-employed.

To provide an integrated picture of health insurance, data collected from the first sampling frame (employers and insurance providers) are linked back to data provided by the MEPS HC respondents. Data from the other three sampling frames are collected to provide annual national and State estimates of the supply of private health insurance available to American workers and to evaluate policy issues pertaining to health insurance.

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   Nursing Home Component

 The 1996 MEPS NHC was a survey of nursing homes and persons residing in or admitted to nursing homes at any time during calendar year 1996. The NHC gathered information on the demographic

characteristics, residence history, health and functional status, use of services, use of prescription medicines, and health care expenditures of nursing home residents. Nursing home administrators and designated staff also provided information on facility size, ownership, certification status, services provided, revenues and expenses, and other facility characteristics. Data on the income, assets, family relationships, and care-giving services for sampled nursing home residents were obtained from next-of-kin or other knowledgeable persons in the community.

The 1996 MEPS NHC sample was selected using a two-stage stratified probability design. In the first stage, facilities were selected; in the second stage, facility residents were sampled, selecting both persons in residence on January 1, 1996, and those admitted during the period January 1 through December 31.

The sample frame for facilities was derived from the National Health Provider Inventory, which is updated periodically by NCHS. The MEPS NHC data were collected in person in three rounds of data collection over a 1½-year period using the CAPI system. Community data were collected by telephone using computer-assisted telephone interviewing (CATI) technology. At the end of three rounds of data collection, the sample consisted of 815 responding facilities, 3,209 residents in the facility on January 1, and 2,690 eligible residents admitted during 1996.

5.0   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 and microdata files. Summary reports are released as printed documents and electronic files. Microdata files are released on CD-ROM and/or as electronic files.

Printed documents and CD-ROMs are available through the AHRQ Publications Clearinghouse. Write or call:

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

Be sure to specify the AHRQ number of the document or CD-ROM you are requesting. Selected electronic files are available from the Internet on the MEPS web site: <http://www.meps.ahrq.gov/>.

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

C. Technical and Programming Information

1.0   General Information

This documentation describes the MEPS Public Use Release HC-016I, which is the Appendix to MEPS releases HC-016A through HC-016H. This release contains two data files, both of which are provided in ASCII and SAS versions: 1) the condition-event link file; and 2) the prescribed medicines-event link file. Also included in this release are two tables provided as PDF files: 1) the condition-event frequency table and 2) the utilization and expenditures summary table.

This documentation offers a brief overview of the content and structure of the files and the codebooks (provided as files H16IF1CB.PDF and H16IF2CB.PDF). It contains the following sections:

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

For more information on MEPS HC survey design see S. Cohen, 1997; J. Cohen, 1997; and S. Cohen, 1996. For information on the MEPS MPC design, see S. Cohen, 1998. Both reports, along with a copy of the survey instruments used to collect the information on this file, is 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 1997 event-level data files. File 1, the H16IF1 or "CLNK" file, is used for linking the MEPS condition file with the MEPS event files; File 2, the H16IF2 or "RXLNK" file, is used for linking the MEPS prescribed medicines event file with other MEPS event files.

2.1   Codebook Format

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

IDENTIFIER	DESCRIPTION
Name	Variable name (maximum of 8 characters)
Description	Variable descriptor (maximum of 40 characters)
Format	Number of bytes

Type	Type of data: numeric (indicated by NUM) or character (indicated by CHAR)
Start	Beginning column position of variable in record
End	Ending column position of variable in record

2.2 Variable Naming and Source

In general, variable names reflect the content of the variable, with an 8 character limitation. All variables contained on Files 1 and 2 were derived from the CAPI.

2.3 Contents of File 1: Condition-Event Link File

File 1, (H16IF1) or the CLNK file, contains the variables needed to link each record on the MEPS 1997 condition file, HC-018, with one or more records on the MEPS 1997 event files, HC-016A through HC-016H. Section 3.0 contains additional information on completing this linkage.

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

CONDIDX is the ID which uniquely identifies each condition for a person and corresponds to a unique record on the MEPS 1997 Condition file, HC-018.   There may be more than one record on the CLNK file for a specific CONDIDX value.

EVNTIDX is the 12-digit number which uniquely identifies each event for a person and corresponds to a unique record on one of the MEPS 1997 event files, HC-016A through HC-016H. There may be more than one record on the CLNK file for a specific EVNTIDX value.

CLNKIDX is the 24-digit number which uniquely identifies each record on the CLNK file and is the combination of CONDIDX + EVNTIDX. There is just one record on this file for each value of CLNKIDX, i.e., each unique combination of CONDIDX + EVNTIDX.

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

    1 = MVIS - office-based medical provider visit event contained on MEPS release HC-016G
    2 = OPAT - outpatient department visit event contained on MEPS release HC-016F
    3 = EROM - emergency room visit event contained on MEPS release HC-016E
    4 = STAZ - hospital inpatient stay event contained on MEPS release HC-016D
    5 = DVIS - dental visit event contained on MEPS release HC-016B
    7 = HVIS - home health visit event contained on MEPS release HC-016H
    8 = PMED - prescribed medicines event contained on MEPS release HC-016A

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

File 2, (H16IF2) or the RXLK file, contains the variables needed to link each record on the MEPS 1997 prescribed medicines file, HC-016A, with one or more records on the MEPS 1997 event files, HC-016B through HC-016H. 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 1997 event files, HC-016BA through HC-016H. 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-016A 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-016A 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-016G
> 2 = OPAT - outpatient department visit event contained on MEPS release HC-016F
> 3 = EROM - emergency room visit event contained on MEPS release HC-016E
> 4 = STAZ - hospital inpatient stay event contained on MEPS release HC-016D
> 5 = DVIS - dental visit event contained on MEPS release HC-016B
> 6 = OMED - other medical expense event contained on MEPS release HC-016C

2.5   Condition-Event Frequency Table

The file H16IT1.PDF contains the "MEPS 1997 Condition-Event Frequency" table. This table contains unweighted and weighted counts of records on the MEPS 1997 event files, HC-016A through HC-016H, for each of the condition, procedure and clinical classification codes contained on the MEPS 1997 condition file, HC-018. Attachment 1 contains a crosswalk of the clinical classification codes to ICD-9 codes. See the HC-018 document for additional information on these codes.

2.6　Utilization and Expenditures Summary Table

The file H16IT2.PDF contains the "MEPS 1997 Utilization and Expenditures Summary" table.　This table contains statistics for all of the utilization and expenditure variables contained on the MEPS 1997 Full Year Use and Expenditure Data file, HC-020.　For each of these variables, the following statistics are provided from the HC-020 file,　and from the corresponding event-level file(s) HC-016A through HC-016H:

> Number of persons with positive person-level weight (WTDPER97) 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-020 variables from the event-level files.

3.0　Merging/Linking MEPS Data Files

This section provides information on using each of the two HC-016I files, RXLK and CLNK, to link with the files contained in MEPS releases HC-018 and HC-016A through HC-016H.　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 RXLNK and CLNK Files with the Medical　Conditions File (HC-018), the Prescribed Medicines and Office-Based Medical Provider Visits Event Files (HC-016A and HC-016G)

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-018), the CLNK file, the office-based medical provider visit event file (HC-016G), the RXLK file, and the prescribed medicines event file (HC-016A).　It includes the following major steps:

1.　From HC-018 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-016G 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-016G 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-016A linked to those visits.

6.   Using these record IDs obtain the linked records from the HC-016A 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-018) and the Prescribed Medicines Event File (HC-016A)

This example calculates the total expenditure for prescribed medicines associated with asthma, using the condition file (HC-018), the CLNK file and the prescribed medicines event file (HC-016A). It includes the following major steps:

1.   From HC-018 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-016A 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-018) and Office-Based Medical Provider Visits Event File (HC-016G)

This example calculates the total expenditures for office-based medical provider visits associated with asthma, using the condition file (HC-018), the CLNK file and the office-based medical provider visits event file (HC-016G). It includes the following major steps:

1.   From HC-018 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-016G 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-016G 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 RXLNK File with the Other Medical Expenses Event File (HC-016C)

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 RXLNK file and the other medical expenses event file (HC-016C). It includes the following major steps:

1.	From HC-016C file select only records for other medical expense type of insulin, for persons with a positive weight.

2.	Use the RXLNK 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-016A file, and calculate the weighted sum of the expenditure variable.

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

## 3.5	Limitations/Caveats of the CLNK File

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

## 3.6	Limitations/Caveats of the RXLK File

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

Attachment 1
Clinical Classification Code to
ICD-9 Code Crosswalk

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

Diagnosis category
ICD-9-CM codes

1   Tuberculosis

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

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

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

Diagnosis category
ICD-9-CM codes

2   Septicemia (except in labor)

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

3   Bacterial infection, unspecified site

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

4   Mycoses

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

5   HIV infection

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

6   Hepatitis

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

7   Viral infection

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

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

Diagnosis category
ICD-9-CM codes

8 Other infections, including parasitic

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

9 Sexually transmitted infections (not HIV or hepatitis)

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

10 Immunizations and screening for infectious disease

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

11 Cancer of head and neck

Diagnosis category
ICD-9-CM codes

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

12   Cancer of esophagus

V1003	1500	1501	1502	1503	1504	1505	1508	1509	2301

13   Cancer of stomach

V1004	1510	1511	1512	1513	1514	1515	1516	1518	1519	2302

14   Cancer of colon

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

15   Cancer of rectum and anus

V1006	1540	1541	1542	1543	1548	2304	2305	2306

16   Cancer of liver and intrahepatic bile duct

V1007	1550	1551	1552	2308

17   Cancer of pancreas

1570	1571	1572	1573	1574	1578	1579

18   Cancer of other GI organs, peritoneum

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

19   Cancer of bronchus, lung

V1011	1622	1623	1624	1625	1628	1629	2312

20   Cancer, other respiratory and intrathoracic

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

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

Diagnosis category
ICD-9-CM codes

21   Cancer of bone and connective tissue

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

22   Melanomas of skin

V1082	1720	1721	1722	1723	1724	1725	1726	1727	1728	1729

23   Other non-epithelial cancer of skin

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

24   Cancer of breast

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

25   Cancer of uterus

V1042	179	1820	1821	1828	2332

26   Cancer of cervix

V1041	1800	1801	1808	1809	2331	7950

27   Cancer of ovary

V1043	1830

28   Cancer of other female genital organs

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

29   Cancer of prostate

V1046	185	2334

30   Cancer of testis

V1047	1860	1869

31   Cancer of other male genital organs

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

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

Diagnosis category
ICD-9-CM codes

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32   Cancer of bladder

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

33   Cancer of kidney and renal pelvis

| V1052 | 1890 | 1891 |

34   Cancer of other urinary organs

| V1050 | V1059 | 1892 | 1893 | 1894 | 1898 | 1899 | 2339 |

35   Cancer of brain and nervous system

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

36   Cancer of thyroid

| V1087 | 193 |

37   Hodgkin's disease

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

38   Non-Hodgkin's lymphoma

V1071	V1079	20000	20001	20002	20003	20004	20005	20006	20007	20008	20010
20011	20012	20013	20014	20015	20016	20017	20018	20020	20021	20022	20023
20024	20025	20026	20027	20028	20080	20081	20082	20083	20084	20085	20086
20087	20088	20200	20201	20202	20203	20204	20205	20206	20207	20208	20210
20211	20212	20213	20214	20215	20216	20217	20218	20220	20221	20222	20223
20224	20225	20226	20227	20228	20280	20281	20282	20283	20284	20285	20286
20287	20288	20290	20291	20292	20293	20294	20295	20296	20297	20298

39   Leukemias

V1060	V1061	V1062	V1063	V1069	20240	20241	20242	20243	20244	20245	20246
20247	20248	2031	20310	20311	2040	20400	20401	2041	20410	20411	2042
20420	20421	2048	20480	20481	2049	20490	20491	2050	20500	20501	2051
20510	20511	2052	20520	20521	2053	20530	20531	2058	20580	20581	2059

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

Diagnosis category
ICD-9-CM codes

20590	20591	2060	20600	20601	2061	20610	20611	2062	20620	20621	2068
20680	20681	2069	20690	20691	2070	20700	20701	2071	20710	20711	2072
20720	20721	2078	20780	20781	2080	20800	20801	2081	20810	20811	2082
20820	20821	2088	20880	20881	2089	20890	20891				

40   Multiple myeloma

2030	20300	20301	2038	20380	20381

41   Cancer, other and unspecified primary

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

42   Secondary malignancies

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

43   Malignant neoplasm without specification of site

1990	1991

44   Neoplasms of unspecified nature or uncertain behavior

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

45   Maintenance chemotherapy, radiotherapy

V580	V581	V661	V662	V671	V672

46   Benign neoplasm of uterus

2180	2181	2182	2189	2190	2191	2198	2199

47   Other and unspecified benign neoplasm

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

Diagnosis category
ICD-9-CM codes

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

48   Thyroid disorders

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

49   Diabetes mellitus without complication

25000	25001	7902	7915	7916

50   Diabetes mellitus with complications

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

51   Other endocrine disorders

2510	2511	2512	2513	2514	2515	2518	2519	2520	2521	2528	2529
2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541
2548	2549	2550	2551	2552	2553	2554	2555	2556	2558	2559	2560
2561	2562	2563	2564	2568	2569	2570	2571	2572	2578	2579	2580
2581	2588	2589	2590	2591	2592	2593	2594	2598	2599	7946	

52   Nutritional deficiencies

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

53   Disorders of lipid metabolism

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

Diagnosis category
ICD-9-CM codes

2720	2721	2722	2723	2724

54 Gout and other crystal arthropathies

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

55 Fluid and electrolyte disorders

2760	2761	2762	2763	2764	2765	2766	2767	2768	2769

56 Cystic fibrosis

27700 27701

57 Immunity disorders

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

58 Other nutritional, endocrine, and metabolic disorders

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

59 Deficiency and other anemia

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

60 Acute posthemorrhagic anemia

2851

61 Sickle cell anemia

2825	28260	28261	28262	28263	28269

62 Coagulation and hemorrhagic disorders

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

Diagnosis category
ICD-9-CM codes

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

63   Diseases of white blood cells

2880	2881	2882	2883	2888	2889

64   Other hematologic conditions

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

65   Mental retardation

317	3180	3181	3182	319

66   Alcohol-related mental disorders

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

67   Substance-related mental disorders

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

68   Senility and organic mental disorders

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

69   Affective disorders

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

70   Schizophrenia and related disorders

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

Diagnosis category
ICD-9-CM codes

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

71   Other psychoses

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

72   Anxiety, somatoform, dissociative, and personality disorders

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

73   Preadult disorders

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

74   Other mental conditions

30089	3009	3021	3022	3023	3024	30250	30251	30252	30253	3026	30270
30271	30272	30273	30274	30275	30276	30279	30281	30282	30283	30284	30285
30289	3029	3060	3061	3062	3063	3064	30650	30651	30652	30653	30659
3066	3067	3068	3069	3070	3071	30720	30721	30722	30723	3073	30746
30750	30751	30752	30753	30754	30759	3076	3077	3090	3091	30922	30923
30924	30928	30929	3093	3094	30982	30983	30989	3099	311	3131	31322
31323	3133	31381	31382	31383	31389	3139	31500	31501	31502	31509	3151
3152	31531	31532	31539	3154	3155	3158	3159	316	7801		

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

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

Diagnosis category
ICD-9-CM codes

11283	1142	11501	11511	11591	3200	3201	3202	3203	3207	3208	32081
32082	32089	3209	3210	3211	3212	3213	3214	3218	3220	3221	3222
3229											

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

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

78   Other CNS infection and poliomyelitis

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

79   Parkinson's disease

3320

80   Multiple sclerosis

340

81   Other hereditary and degenerative nervous system conditions

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

82   Paralysis

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

83   Epilepsy, convulsions

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

84   Headache, including migraine

		Diagnosis category ICD-9-CM codes								

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

85 Coma, stupor, and brain damage

3481	7800	78001	78003	78009

86 Cataract

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

87 Retinal detachments, defects, vascular occlusion, and retinopathy

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

88 Glaucoma

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

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

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

Diagnosis category
ICD-9-CM codes

36011	36012	36013	36014	36019	36300	36301	36303	36304	36305	36306	36307
36308	36310	36311	36312	36313	36314	36315	36320	36321	36322	36400	36401
36402	36403	36404	36405	36410	36411	36421	36422	36423	36424	3643	37020
37021	37022	37023	37024	37031	37032	37033	37034	37035	37040	37044	37049
37050	37052	37054	37055	37059	3708	3709	37200	37201	37202	37203	37204
37205	37210	37211	37212	37213	37214	37215	37220	37221	37222	37230	37231
37233	37239	37300	37301	37302	37311	37312	37313	37331	37332	37333	37334
3734	3735	3736	3738	3739	37500	37501	37502	37503	37530	37531	37532
37533	37541	37542	37543	37600	37601	37602	37603	37604	37610	37611	37612
37613	37730	37731	37732	37733	37734	37739	37900	37901	37902	37903	37904
37905	37906	37907	37909								

91 Other eye disorders

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

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

Diagnosis category
ICD-9-CM codes

37993   37999

92   Otitis media and related conditions

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

93   Conditions associated with dizziness or vertigo

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

94   Other ear and sense organ disorders

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

95   Other nervous system disorders

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

Diagnosis category
ICD-9-CM codes

96   Heart valve disorders

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

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

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

98   Essential hypertension

| 4011 | 4019 |

99   Hypertension with complications and secondary hypertension

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

100   Acute myocardial infarction

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

101   Coronary atherosclerosis and other heart disease

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

102   Nonspecific chest pain

| 78650 | 78651 | 78659 |

103   Pulmonary heart disease

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

104   Other and ill-defined heart disease

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

Diagnosis category
ICD-9-CM codes

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

105   Conduction disorders

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

106   Cardiac dysrhythmias

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

107   Cardiac arrest and ventricular fibrillation

42741	42742	4275

108   Congestive heart failure, nonhypertensive

39891	4280	4281	4289

109   Acute cerebrovascular disease

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

110   Occlusion or stenosis of precerebral arteries

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

111   Other and ill-defined cerebrovascular disease

4370	4371	4373	4374	4375	4376	4377	4378	4379

112   Transient cerebral ischemia

4350	4351	4352	4353	4358	4359

113   Late effects of cerebrovascular disease

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

114   Peripheral and visceral atherosclerosis

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

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

Diagnosis category
ICD-9-CM codes

5571	5579

115   Aortic, peripheral, and visceral artery aneurysms

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

116   Aortic and peripheral arterial embolism or thrombosis

4440	4441	44421	44422	44481	44489	4449

117   Other circulatory disease

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

118   Phlebitis, thrombophlebitis and thromboembolism

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

119   Varicose veins of lower extremity

4540	4541	4542	4549

120   Hemorrhoids

4550	4551	4552	4553	4554	4555	4556	4557	4558	4559

121   Other diseases of veins and lymphatics

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

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

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

123   Influenza

4870	4871	4878

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

Diagnosis category
ICD-9-CM codes

124	Acute and chronic tonsillitis										
	463	4740	47400	47401	47402	47410	47411	47412	4742	4748	4749	475

125   Acute bronchitis

4660	4661	46611	46619

126   Other upper respiratory infections

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

127   Chronic obstructive pulmonary disease and bronchiectasis

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

128   Asthma

49300	49301	49310	49311	49320	49321	49390	49391

129   Aspiration pneumonitis, food/vomitus

5070

130   Pleurisy, pneumothorax, pulmonary collapse

5100	5109	5110	5111	5118	5119	5120	5128	5180	5181	5182

131   Respiratory failure, insufficiency, arrest (adult)

V461	5185	51881	51882	51883	51884	7991

132   Lung disease due to external agents

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

133   Other lower respiratory disease

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

134   Other upper respiratory disease

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

Diagnosis category
ICD-9-CM codes

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

135   Intestinal infection

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

136   Disorders of teeth and jaw

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

137   Diseases of mouth, excluding dental

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

138   Esophageal disorders

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

139   Gastroduodenal ulcer (except hemorrhage)

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

140   Gastritis and duodenitis

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

Diagnosis category
ICD-9-CM codes

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

141   Other disorders of stomach and duodenum

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

142   Appendicitis and other appendiceal conditions

5400	5401	5409	541	542	5430	5439

143   Abdominal hernia

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

144   Regional enteritis and ulcerative colitis

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

145   Intestinal obstruction without hernia

5600	5601	5602	56030	56031	56039	56081	56089	5609

146   Diverticulosis and diverticulitis

56200	56201	56202	56203	56210	56211	56212	56213

147   Anal and rectal conditions

5646	5650	5651	566	5690	5691	5692	56941	56942	56949

148   Peritonitis and intestinal abscess

03283	5670	5671	5672	5678	5679	5695

149   Biliary tract disease

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

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

Diagnosis category
ICD-9-CM codes

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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   5641   5645   5647   5648   56481   56489
    5649   5680   56881   56882   56889   5689   56981   56982   56983   56984   56985   56989
    5699   5790   5791   5792   5798   5799   7871   7872   7873   7874   7875   7876
    7877   7879   78791   78799   7892   7893   78930   78931   78932   78933   78934   78935
    78936   78937   78939   7894   78940   78941   78942   78943   78944   78945   78946   78947
    78949   7899   7921   7934   7936

156   Nephritis, nephrosis, renal sclerosis

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

157   Acute and unspecified renal failure

    5845   5846   5847   5848   5849   586

158   Chronic renal failure

    V420   V451   V560   V561   V562   V568   585

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

Diagnosis category
ICD-9-CM codes

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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	78869	7887	7888	7889
7910	7911	7912	7913	7914	7917	7919	7935	7944			

164   Hyperplasia of prostate

600

165   Inflammatory conditions of male genital organs

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

166   Other male genital disorders

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

167   Nonmalignant breast conditions

6100	6101	6102	6103	6104	6108	6109	6110	6111	6112	6113	6114

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

Diagnosis category
ICD-9-CM codes

6115	6116	61171	61172	61179	6118	6119

168   Inflammatory diseases of female pelvic organs

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

169   Endometriosis

6170	6171	6172	6173	6174	6175	6176	6178	6179

170   Prolapse of female genital organs

6180	6181	6182	6183	6184	6185	6186	6187	6188	6189

171   Menstrual disorders

6253	6260	6261	6262	6263	6264	6265	6266	6268	6269

172   Ovarian cyst

6200	6201	6202

173   Menopausal disorders

V074	6270	6271	6272	6273	6274	6278	6279

174   Female infertility

6280	6281	6282	6283	6284	6288	6289

175   Other female genital disorders

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

176   Contraceptive and procreative management

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

177   Spontaneous abortion

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

Diagnosis category
ICD-9-CM codes

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

178   Induced abortion

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

179   Postabortion complications

6390	6391	6392	6393	6394	6395	6396	6398	6399

180   Ectopic pregnancy

6330	6331	6332	6338	6339

181   Other complications of pregnancy

630	631	632	64300	64301	64303	64310	64311	64313	64320	64321	64323
64380	64381	64383	64390	64391	64393	64600	64601	64603	64610	64611	64612
64613	64614	64620	64621	64622	64623	64624	64630	64631	64633	64640	64641
64642	64643	64644	64650	64651	64652	64653	64654	64660	64661	64662	64663
64664	64670	64671	64673	64680	64681	64682	64683	64684	64690	64691	64693
64700	64701	64702	64703	64704	64710	64711	64712	64713	64714	64720	64721
64722	64723	64724	64730	64731	64732	64733	64734	64740	64741	64742	64743
64744	64750	64751	64752	64753	64754	64760	64761	64762	64763	64764	64780
64781	64782	64783	64784	64790	64791	64792	64793	64794	64810	64811	64812
64813	64814	64820	64821	64822	64823	64824	64830	64831	64832	64833	64834
64840	64841	64842	64843	64844	64850	64851	64852	64853	64854	64860	64861
64862	64863	64864	64870	64871	64872	64873	64874	64890	64891	64892	64893
64894											

182   Hemorrhage during pregnancy, abruptio placenta, placenta previa

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

183   Hypertension complicating pregnancy, childbirth and the puerperium

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

Diagnosis category
ICD-9-CM codes

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

184 Early or threatened labor

64400 64403 64410 64413 64420 64421

185 Prolonged pregnancy

64500 64501 64503

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

64800 64801 64802 64803 64804 64880 64881 64882 64883 64884

187 Malposition, malpresentation

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

188 Fetopelvic disproportion, obstruction

65300	65301	65303	65310	65311	65313	65320	65321	65323	65330	65331	65333
65340	65341	65343	65350	65351	65353	65360	65361	65363	65370	65371	65373
65380	65381	65383	65390	65391	65393	66010	66011	66013	66020	66021	66023
66030	66031	66033	66040	66041	66043	66050	66051	66053	66060	66061	66063
66070	66071	66073	66080	66081	66083	66090	66091	66093			

189 Previous C-section

65420 65421 65423

190 Fetal distress and abnormal forces of labor

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

191 Polyhydramnios and other problems of amniotic cavity

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

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

Diagnosis category
ICD-9-CM codes

192   Umbilical cord complication

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

193   Trauma to perineum and vulva

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

194   Forceps delivery

66950   66951

195   Other complications of birth, puerperium affecting management of mother

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

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

Diagnosis category
ICD-9-CM codes

67440	67442	67444	67480	67482	67484	67490	67492	67494	67500	67501	67502
67503	67504	67510	67511	67512	67513	67514	67520	67521	67522	67523	67524
67580	67581	67582	67583	67584	67590	67591	67592	67593	67594	67600	67601
67602	67603	67604	67610	67611	67612	67613	67614	67620	67621	67622	67623
67624	67630	67631	67632	67633	67634	67640	67641	67642	67643	67644	67650
67651	67652	67653	67654	67660	67661	67662	67663	67664	67680	67681	67682
67683	67684	67690	67691	67692	67693	67694	677				

196   Normal pregnancy and/or delivery

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

197   Skin and subcutaneous tissue infections

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

198   Other inflammatory condition of skin

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

199   Chronic ulcer of skin

7070	7071	7078	7079

200   Other skin disorders

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

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

00323	00324	0261	03682	05671	71100	71101	71102	71103	71104	71105	71106
71107	71108	71109	71110	71111	71112	71113	71114	71115	71116	71117	71118
71119	71120	71121	71122	71123	71124	71125	71126	71127	71128	71129	71130
71131	71132	71133	71134	71135	71136	71137	71138	71139	71140	71141	71142
71143	71144	71145	71146	71147	71148	71149	71150	71151	71152	71153	71154

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

Diagnosis category
ICD-9-CM codes

71155	71156	71157	71158	71159	71160	71161	71162	71163	71164	71165	71166
71167	71168	71169	71170	71171	71172	71173	71174	71175	71176	71177	71178
71179	71180	71181	71182	71183	71184	71185	71186	71187	71188	71189	71190
71191	71192	71193	71194	71195	71196	71197	71198	71199	73000	73001	73002
73003	73004	73005	73006	73007	73008	73009	73010	73011	73012	73013	73014
73015	73016	73017	73018	73019	73020	73021	73022	73023	73024	73025	73026
73027	73028	73029	73030	73031	73032	73033	73034	73035	73036	73037	73038
73039	73070	73071	73072	73073	73074	73075	73076	73077	73078	73079	73080
73081	73082	73083	73084	73085	73086	73087	73088	73089	73090	73091	73092
73093	73094	73095	73096	73097	73098	73099					

202   Rheumatoid arthritis and related disease

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

203   Osteoarthritis

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

204   Other non-traumatic joint disorders

7130	7131	7132	7133	7134	7135	7136	7137	7138	71600	71601	71602
71603	71604	71605	71606	71607	71608	71609	71620	71621	71622	71623	71624
71625	71626	71627	71628	71629	71630	71631	71632	71633	71634	71635	71636
71637	71638	71639	71640	71641	71642	71643	71644	71645	71646	71647	71648
71649	71650	71651	71652	71653	71654	71655	71656	71657	71658	71659	71660
71661	71662	71663	71664	71665	71666	71667	71668	71680	71681	71682	71683
71684	71685	71686	71687	71688	71689	71690	71691	71692	71693	71694	71695
71696	71697	71698	71699	71810	71811	71812	71813	71814	71815	71817	71818
71819	71820	71821	71822	71823	71824	71825	71826	71827	71828	71829	71850
71851	71852	71853	71854	71855	71856	71857	71858	71859	71860	71865	71880
71881	71882	71883	71884	71885	71886	71887	71888	71889	71890	71891	71892
71893	71894	71895	71897	71898	71899	71900	71901	71902	71903	71904	71905
71906	71907	71908	71909	71910	71911	71912	71913	71914	71915	71916	71917
71918	71919	71920	71921	71922	71923	71924	71925	71926	71927	71928	71929
71930	71931	71932	71933	71934	71935	71936	71937	71938	71939	71940	71941
71942	71943	71944	71945	71946	71947	71948	71949	71950	71951	71952	71953
71954	71955	71956	71957	71958	71959	71960	71961	71962	71963	71964	71965
71966	71967	71968	71969	71970	71975	71976	71977	71978	71979	71980	71981
71982	71983	71984	71985	71986	71987	71988	71989	71990	71991	71992	71993
71994	71995	71996	71997	71998	71999						

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

Diagnosis category
ICD-9-CM codes

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205 Spondylosis, intervertebral disc disorders, other back problems

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

206 Osteoporosis

73300	73301	73302	73303	73309

207 Pathological fracture

7331	73310	73311	73312	73313	73314	73315	73316	73319

208 Acquired foot deformities

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

209 Other acquired deformities

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

210 Systemic lupus erythematosus and connective tissue disorders

7100	7101	7102	7103	7104	7108	7109

211 Other connective tissue disease

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

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

Diagnosis category
ICD-9-CM codes

7291	7292	72930	72931	72939	7294	7295	7296	72981	72982	72989	7299
7819	7937										

212 Other bone disease and musculoskeletal deformities

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

213 Cardiac and circulatory congenital anomalies

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

214 Digestive congenital anomalies

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

215 Genitourinary congenital anomalies

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

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

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

Diagnosis category
ICD-9-CM codes

74921	74922	74923	74924	74925	7540	7541	7542	75430	75431	75432	75433
75435	75440	75441	75442	75443	75444	75450	75451	75452	75453	75459	75460
75461	75462	75469	75470	75471	75479	75481	75482	75489	75500	75501	75502
75510	75511	75512	75513	75514	75520	75521	75522	75523	75524	75525	75526
75527	75528	75529	75530	75531	75532	75533	75534	75535	75536	75537	75538
75539	7554	75550	75551	75552	75553	75554	75555	75556	75557	75558	75559
75560	75561	75562	75563	75564	75565	75566	75567	75569	7558	7559	7560
75610	75611	75612	75613	75614	75615	75616	75617	75619	7562	7563	7564
75650	75651	75652	75653	75654	75655	75656	75659	7566	7567	75670	75671
75679	75681	75682	75683	75689	7569	7570	7571	7572	75731	75732	75733
75739	7574	7575	7576	7578	7579	7580	7581	7582	7583	7584	7585
7586	7587	7588	75881	75889	7589	7590	7591	7592	7593	7594	7595
7596	7597	7598	75981	75982	75983	75989	7599	7952			

218   Liveborn

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

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

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

220   Intrauterine hypoxia and birth asphyxia

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

Diagnosis category
ICD-9-CM codes

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

224   Other perinatal conditions

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

225   Joint disorders and dislocations, trauma-related

71610	71611	71612	71613	71614	71615	71616	71617	71618	71619	7170	7171
7172	7173	71740	71741	71742	71743	71749	7175	7176	7177	71781	71782
71783	71784	71785	71789	7179	71800	71801	71802	71803	71804	71805	71807
71808	71809	71830	71831	71832	71833	71834	71835	71836	71837	71838	71839
8300	8301	83100	83101	83102	83103	83104	83109	83110	83111	83112	83113
83114	83119	83200	83201	83202	83203	83204	83209	83210	83211	83212	83213
83214	83219	83300	83301	83302	83303	83304	83305	83309	83310	83311	83312
83313	83314	83315	83319	83400	83401	83402	83410	83411	83412	83500	83501
83502	83503	83510	83511	83512	83513	8360	8361	8362	8363	8364	83650
83651	83652	83653	83654	83659	83660	83661	83662	83663	83664	83669	8370
8371	83800	83801	83802	83803	83804	83805	83806	83809	83810	83811	83812
83813	83814	83815	83816	83819	83900	83901	83902	83903	83904	83905	83906
83907	83908	83910	83911	83912	83913	83914	83915	83916	83917	83918	83920
83921	83930	83931	83940	83941	83942	83949	83950	83951	83952	83959	83961
83969	83971	83979	8398	8399	9056						

226   Fracture of neck of femur (hip)

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

227   Spinal cord injury

80600	80601	80602	80603	80604	80605	80606	80607	80608	80609	80610	80611
80612	80613	80614	80615	80616	80617	80618	80619	80620	80621	80622	80623
80624	80625	80626	80627	80628	80629	80630	80631	80632	80633	80634	80635

Diagnosis category
ICD-9-CM codes

80636	80637	80638	80639	8064	8065	80660	80661	80662	80669	80670	80671
80672	80679	8068	8069	9072	95200	95201	95202	95203	95204	95205	95206
95207	95208	95209	95210	95211	95212	95213	95214	95215	95216	95217	95218
95219	9522	9523	9524	9528	9529	99655	99656	99668			

228   Skull and face fractures

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

229   Fracture of upper limb

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

230   Fracture of lower limb

82100	82101	82110	82111	82120	82121	82122	82123	82129	82130	82131	82132
82133	82139	8220	8221	82300	82301	82302	82310	82311	82312	82320	82321
82322	82330	82331	82332	82380	82381	82382	82390	82391	82392	8240	8241
8242	8243	8244	8245	8246	8247	8248	8249	8250	8251	82520	82521
82522	82523	82524	82525	82529	82530	82531	82532	82533	82534	82535	82539
8260	8261	8270	8271	9054							

231   Other fractures

V540	V664	V674	80500	80501	80502	80503	80504	80505	80506	80507	80508
80510	80511	80512	80513	80514	80515	80516	80517	80518	8052	8053	8054
8055	8056	8057	8058	8059	80700	80701	80702	80703	80704	80705	80706

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

Diagnosis category
ICD-9-CM codes

80707	80708	80709	80710	80711	80712	80713	80714	80715	80716	80717	80718
80719	8072	8073	8074	8075	8076	8080	8081	8082	8083	80841	80842
80843	80849	80851	80852	80853	80859	8088	8089	8090	8091	8280	8281
8290	8291	9051	9055								

232 Sprains and strains

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

233 Intracranial injury

80010	80011	80012	80013	80014	80015	80016	80019	80020	80021	80022	80023
80024	80025	80026	80029	80030	80031	80032	80033	80034	80035	80036	80039
80040	80041	80042	80043	80044	80045	80046	80049	80060	80061	80062	80063
80064	80065	80066	80069	80070	80071	80072	80073	80074	80075	80076	80079
80080	80081	80082	80083	80084	80085	80086	80089	80090	80091	80092	80093
80094	80095	80096	80099	80110	80111	80112	80113	80114	80115	80116	80119
80120	80121	80122	80123	80124	80125	80126	80129	80130	80131	80132	80133
80134	80135	80136	80139	80140	80141	80142	80143	80144	80145	80146	80149
80160	80161	80162	80163	80164	80165	80166	80169	80170	80171	80172	80173
80174	80175	80176	80179	80180	80181	80182	80183	80184	80185	80186	80189
80190	80191	80192	80193	80194	80195	80196	80199	80310	80311	80312	80313
80314	80315	80316	80319	80320	80321	80322	80323	80324	80325	80326	80329
80330	80331	80332	80333	80334	80335	80336	80339	80340	80341	80342	80343
80344	80345	80346	80349	80360	80361	80362	80363	80364	80365	80366	80369
80370	80371	80372	80373	80374	80375	80376	80379	80380	80381	80382	80383
80384	80385	80386	80389	80390	80391	80392	80393	80394	80395	80396	80399
80410	80411	80412	80413	80414	80415	80416	80419	80420	80421	80422	80423
80424	80425	80426	80429	80430	80431	80432	80433	80434	80435	80436	80439
80440	80441	80442	80443	80444	80445	80446	80449	80460	80461	80462	80463
80464	80465	80466	80469	80470	80471	80472	80473	80474	80475	80476	80479
80480	80481	80482	80483	80484	80485	80486	80489	80490	80491	80492	80493
80494	80495	80496	80499	8500	8501	8502	8503	8504	8505	8509	85100
85101	85102	85103	85104	85105	85106	85109	85110	85111	85112	85113	85114
85115	85116	85119	85120	85121	85122	85123	85124	85125	85126	85129	85130
85131	85132	85133	85134	85135	85136	85139	85140	85141	85142	85143	85144
85145	85146	85149	85150	85151	85152	85153	85154	85155	85156	85159	85160
85161	85162	85163	85164	85165	85166	85169	85170	85171	85172	85173	85174
85175	85176	85179	85180	85181	85182	85183	85184	85185	85186	85189	85190
85191	85192	85193	85194	85195	85196	85199	85200	85201	85202	85203	85204

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

Diagnosis category
ICD-9-CM codes

85205	85206	85209	85210	85211	85212	85213	85214	85215	85216	85219	85220
85221	85222	85223	85224	85225	85226	85229	85230	85231	85232	85233	85234
85235	85236	85239	85240	85241	85242	85243	85244	85245	85246	85249	85250
85251	85252	85253	85254	85255	85256	85259	85300	85301	85302	85303	85304
85305	85306	85309	85310	85311	85312	85313	85314	85315	85316	85319	85400
85401	85402	85403	85404	85405	85406	85409	85410	85411	85412	85413	85414
85415	85416	85419	9070								

234   Crushing injury or internal injury

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

235   Open wounds of head, neck, and trunk

8700	8701	8702	8703	8704	8708	8709	8710	8711	8712	8713	8714
8715	8716	8717	8719	87200	87201	87202	87210	87211	87212	87261	87262
87263	87264	87269	87271	87272	87273	87274	87279	8728	8729	8730	8731
87320	87321	87322	87323	87329	87330	87331	87332	87333	87339	87340	87341
87342	87343	87344	87349	87350	87351	87352	87353	87354	87359	87360	87361
87362	87363	87364	87365	87369	87370	87371	87372	87373	87374	87375	87379
8738	8739	87400	87401	87402	87410	87411	87412	8742	8743	8744	8745
8748	8749	8750	8751	8760	8761	8770	8771	8780	8781	8782	8783
8784	8785	8786	8787	8788	8789	8790	8791	8792	8793	8794	8795
8796	8797	8798	8799	9060							

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

Diagnosis category
ICD-9-CM codes

236 Open wounds of extremities

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

237 Complication of device, implant or graft

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

238 Complications of surgical procedures or medical care

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

239 Superficial injury, contusion

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

240 Burns

Diagnosis category
ICD-9-CM codes

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

241   Poisoning by psychotropic agents

9690	9691	9692	9693	9694	9695	9696	9697	9698	9699

242   Poisoning by other medications and drugs

9090	9095	9600	9601	9602	9603	9604	9605	9606	9607	9608	9609
9610	9611	9612	9613	9614	9615	9616	9617	9618	9619	9620	9621
9622	9623	9624	9625	9626	9627	9628	9629	9630	9631	9632	9633
9634	9635	9638	9639	9640	9641	9642	9643	9644	9645	9646	9647
9648	9649	96500	96501	96502	96509	9651	9654	9655	9656	96561	96569
9657	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

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

Diagnosis category
ICD-9-CM codes

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

243   Poisoning by nonmedicinal substances

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

244   Other injuries and conditions due to external causes

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

245   Syncope

7802

246   Fever of unknown origin

7806

247   Lymphadenitis

2891   2892   2893   683   7856

Diagnosis category
ICD-9-CM codes

248   Gangrene

44024   7854

249   Shock

78550   78551   78559

250   Nausea and vomiting

7870   78701   78702   78703

251   Abdominal pain

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

252   Malaise and fatigue

7807   78071   78079

253   Allergic reactions

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

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

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

255   Administrative/social admission

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

256   Medical examination/evaluation

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

Diagnosis category
ICD-9-CM codes

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

257   Other aftercare

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

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

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

259   Residual codes, unclassified

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

Attachment 2
Sample SAS Jobs for Linking Examples

```
1                                              The SAS System                          08:55 Friday, June 8,
2001

NOTE: Copyright (c) 1989-1996 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 6.12  TS025
      Licensed to SOCIAL & SCIENTIFIC SYSTEMS INC, Site 0026405003.


1             OPTIONS LS=132 PS=59;
2
3             TITLE1 "HC-016I";
4             TITLE2 'Sample SAS Job for Example A';
5
6             LIBNAME IN 'D:\';
NOTE: Libref IN was successfully assigned as follows:
      Engine:        V603
      Physical Name: D:\
7
8             **********************************************************************************************
9             * Calculate the expenditures for prescribed medicines associated with medical visits for asthma.
10            *********************************************************************************************;
11
12            PROC FORMAT;
13              VALUE EVENTYPE
14                  1 = "1 MVIS"
15                  2 = "2 OPAT"
16                  3 = "3 EROM"
17                  4 = "4 STAZ"
18                  5 = "5 DVIS"
19                  6 = "6 OMED"
20                  7 = "7 HVIS"
21                  8 = "8 PMED";
NOTE: Format EVENTYPE has been output.
22
23            RUN;

NOTE: The PROCEDURE FORMAT used 0.22 seconds.


24
25            *-------------------------------------------------------------------------------------
26            * Get condition records coded as asthma.
27            *------------------------------------------------------------------------------------;
28            DATA ASCONDS;
29              SET IN.H18 (KEEP=CONDIDX CCCODEX);
30              IF CCCODEX="128";
31
32            RUN;

NOTE: The data set WORK.ASCONDS has 1763 observations and 2 variables.
NOTE: The DATA statement used 11.85 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: The data set WORK.ASCONDS has 1763 observations and 2 variables.
NOTE: The PROCEDURE SORT used 0.22 seconds.


```
38
39           proc print data=asconds (obs=50);
40              title3 "sample print of work.asconds - sorted by condidx";
41              title4 "COND (H18) records where cccodex=128";
42           run;
```

NOTE: The PROCEDURE PRINT printed page 1.
NOTE: The PROCEDURE PRINT used 0.22 seconds.


```
43
44           PROC SORT DATA=IN.H16IF1 OUT=CLNK; BY CONDIDX; RUN;
```

NOTE: The data set WORK.CLNK has 310651 observations and 5 variables.
NOTE: The PROCEDURE SORT used 19.12 seconds.


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

NOTE: The data set WORK.ASCLNKS has 6789 observations and 3 variables.
NOTE: The DATA statement used 4.55 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: The PROCEDURE PRINT printed pages 2-3.
NOTE: The PROCEDURE PRINT used 0.22 seconds.


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

NOTE: The data set WORK.ASCLNKS has 6789 observations and 3 variables.
NOTE: The PROCEDURE SORT used 0.16 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: The PROCEDURE PRINT printed page 4.
NOTE: The PROCEDURE PRINT used 0.0 seconds.


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

NOTE: The data set WORK.ASCLNKS has 6751 observations and 2 variables.
NOTE: The DATA statement used 0.17 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: The PROCEDURE PRINT printed page 5.
NOTE: The PROCEDURE PRINT used 0.0 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.HC16GF1 (KEEP=EVNTIDX WTDPER97 SEETLKPV);
84            IF WTDPER97 > 0 & SEETLKPV NE 2;
85          RUN;
```

NOTE: The data set WORK.MVIS has 142119 observations and 3 variables.
NOTE: The DATA statement used 15.69 seconds.


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

NOTE: The data set WORK.MVIS has 142119 observations and 3 variables.
NOTE: The PROCEDURE SORT used 3.79 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: The data set WORK.ASMVIS has 2245 observations and 2 variables.
NOTE: The DATA statement used 0.82 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-016G) events";
103          run;

NOTE: The PROCEDURE PRINT printed page 6.
NOTE: The PROCEDURE PRINT used 0.16 seconds.


104
105          *-----------------------------------------------------------------------------------------
106          * Get PMED IDs linked to the MVIS events which were for asthma.
107          *-----------------------------------------------------------------------------------------;
108          PROC SORT DATA=IN.H16IF2 OUT=RXLK; BY EVNTIDX; RUN;

NOTE: The data set WORK.RXLK has 60020 observations and 5 variables.
NOTE: The PROCEDURE SORT used 2.97 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 eventidx";
116             title4 "Rx+event link file records (HC-16IF2)";
117          run;

NOTE: The PROCEDURE PRINT printed pages 7-11.
NOTE: The PROCEDURE PRINT used 0.16 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: The data set WORK.PMEDIDS has 1683 observations and 3 variables.
NOTE: The DATA statement used 0.39 seconds.


125
126          proc print data=pmedids (obs=50);
127            by evntidx;
128            id evntidx;
129            format eventype eventype.;
```

```
130            title3 "sample print of work.pmedids - sorted by evntidx";
131            title4 "work.rxlk records for evntidxs in work.asmvis";
132        run;
```

NOTE: The PROCEDURE PRINT printed pages 12-13.
NOTE: The PROCEDURE PRINT used 0.0 seconds.

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

NOTE: The data set WORK.PMEDIDS has 1683 observations and 3 variables.
NOTE: The PROCEDURE SORT used 0.0 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: The PROCEDURE PRINT printed page 14.
NOTE: The PROCEDURE PRINT used 0.0 seconds.

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

NOTE: The data set WORK.PMEDIDS has 1584 observations and 1 variables.
NOTE: The DATA statement used 0.05 seconds.

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

NOTE: The PROCEDURE PRINT printed page 15.
NOTE: The PROCEDURE PRINT used 0.0 seconds.

```
150
151        *----------------------------------------------------------------------------------
152        * Get PMED records linked to MVIS events which were for asthma.
153        *---------------------------------------------------------------------------------;
154        PROC SORT DATA=IN.H16A OUT=PMED; BY LINKIDX; RUN;
```

NOTE: The data set WORK.PMED has 234532 observations and 54 variables.
NOTE: The PROCEDURE SORT used 1 minute 36.34 seconds.

```
155
156        DATA MVPMEDS;
```

```
157            MERGE PMED (KEEP=LINKIDX RXRECIDX  RXXP97X WTDPER97 RXNAME)
158                 PMEDIDS (IN=A);
159            BY LINKIDX;
160            IF A;
161          RUN;
```

NOTE: The data set WORK.MVPMEDS has 3611 observations and 5 variables.
NOTE: The DATA statement used 25.71 seconds.

```
162
163          proc print data=mvpmeds (obs=200);
164            var rxrecidx rxname RXXP97X  WTDPER97;
165            by linkidx;
166            id linkidx;
167            title3 "sample print of work.mvpmeds";
168            title4 "PMED (HC-016A) records for unique linkidxs in work.pmedids";
169          run;
```

NOTE: The PROCEDURE PRINT printed pages 16-21.
NOTE: The PROCEDURE PRINT used 0.0 seconds.

```
170
171          PROC MEANS DATA=MVPMEDS N SUM;
172            VAR RXXP97X;
173            TITLE3 "Total Rx expenditures associated with medical visits (excluding telephone) for asthma";
174          RUN;
```

NOTE: The PROCEDURE MEANS printed page 22.
NOTE: The PROCEDURE MEANS used 0.27 seconds.

```
175
176          PROC MEANS DATA=MVPMEDS  N SUM;
177            VAR RXXP97X;
178            WEIGHT WTDPER97;
179            TITLE3 "Total Rx expenditures associated with medical visits (excluding telephone) for asthma";
180            TITLE5 "Weighted";
181          RUN;
```

NOTE: The PROCEDURE MEANS printed page 23.
NOTE: The PROCEDURE MEANS used 0.0 seconds.

```
182
183
184
```

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

Sample SAS Job for Example A
sample print of work.asconds - sorted by condidx
COND (H18) records where cccodex=128

OBS	CONDIDX	CCCODEX
1	000040320014	128
2	000050480022	128
3	000050480038	128
4	000200350110	128
5	000650110054	128
6	000670240039	128
7	000850580014	128
8	000980120017	128
9	001170160082	128
10	001660130011	128
11	001660370019	128
12	001660440018	128
13	001830490013	128
14	001860600013	128
15	001900110024	128
16	002360270026	128
17	002400120025	128
18	002550290027	128
19	003050120030	128
20	003210280044	128
21	003210280135	128
22	003320230104	128
23	003370680016	128
24	003430100019	128
25	003470170019	128
26	003540170016	128
27	003620170023	128
28	003620310015	128
29	003660480029	128
30	003770240045	128
31	004060270035	128
32	004060340103	128
33	004160280015	128
34	004170230124	128
35	004370110021	128
36	004500450016	128
37	004630460039	128
38	004670210023	128
39	004840520061	128
40	005030330030	128
41	005060320036	128
42	005070320015	128
43	005260160028	128
44	005300270020	128
45	005670410030	128
46	005690210026	128
47	005710290049	128
48	005720150043	128
49	005720150093	128
50	005720390063	128

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

```
      CONDIDX         EVNTIDX        EVENTYPE

   000050480022     000050480059     1 MVIS
                    000050480066     1 MVIS
                    000050480073     8 PMED

   000050480038     000050480080     8 PMED
                    000050480097     8 PMED

   000200350110     000200350300     1 MVIS
                    000200350317     1 MVIS
                    000200350444     8 PMED
                    000200350475     8 PMED
                    000200350502     8 PMED
                    000200350519     8 PMED

   000650110054     000650110735     8 PMED
                    000650110766     1 MVIS
                    000650110855     4 STAZ
                    000650110906     8 PMED

   000670240039     000670240239     1 MVIS
                    000670240246     1 MVIS
                    000670240253     8 PMED
                    000670240260     8 PMED
                    000670240277     8 PMED
                    000670240284     8 PMED

   000980120017     000980120070     8 PMED
                    000980120094     1 MVIS
                    000980120107     8 PMED
                    000980120114     8 PMED

   001660440018     001660440028     1 MVIS
                    001660440100     8 PMED

   001860600013     001860600064     1 MVIS
                    001860600071     8 PMED
                    001860600095     8 PMED
                    001860600108     8 PMED
                    001860600122     1 MVIS
                    001860600146     8 PMED
                    001860600160     8 PMED
                    001860600191     8 PMED
                    001860600211     8 PMED
                    001860600228     8 PMED

   002360270026     002360270229     1 MVIS
                    002360270236     1 MVIS
                    002360270243     1 MVIS
                    002360270250     1 MVIS
```

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

CONDIDX	EVNTIDX	EVENTYPE
002360270026	002360270274	8 PMED
	002360270298	8 PMED
	002360270318	8 PMED
	002360270349	8 PMED
	002360270356	8 PMED
	002360270387	8 PMED
	002360270445	8 PMED
002550290027	002550290309	8 PMED
	002550290316	8 PMED
	002550290323	1 MVIS
	002550290330	8 PMED
003050120030	003050120408	8 PMED
	003050120460	1 MVIS
	003050120477	1 MVIS
	003050120559	8 PMED
	003050120580	8 PMED
	003050120597	8 PMED
	003050120600	8 PMED
	003050120617	8 PMED
003320230104	003320230183	8 PMED
003540170016	003540170255	8 PMED
	003540170522	8 PMED
	003540170604	8 PMED
	003540170611	8 PMED
	003540170628	8 PMED
003620310015	003620310090	1 MVIS
	003620310127	8 PMED
	003620310141	1 MVIS
	003620310172	8 PMED
	003620310216	1 MVIS
	003620310223	8 PMED
003660480029	003660480132	1 MVIS
	003660480149	1 MVIS
	003660480156	8 PMED

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

OBS	CONDIDX	EVNTIDX	EVENTYPE
1	000050480022	000050480059	1 MVIS
2	000050480022	000050480066	1 MVIS
3	000050480022	000050480073	8 PMED
4	000050480038	000050480080	8 PMED
5	000050480038	000050480097	8 PMED
6	000200350110	000200350300	1 MVIS
7	000200350110	000200350317	1 MVIS
8	000200350110	000200350444	8 PMED
9	000200350110	000200350475	8 PMED
10	000200350110	000200350502	8 PMED
11	000200350110	000200350519	8 PMED
12	000650110054	000650110735	8 PMED
13	000650110054	000650110766	1 MVIS
14	000650110054	000650110855	4 STAZ
15	000650110054	000650110906	8 PMED
16	000670240039	000670240239	1 MVIS
17	000670240039	000670240246	1 MVIS
18	000670240039	000670240253	8 PMED
19	000670240039	000670240260	8 PMED
20	000670240039	000670240277	8 PMED
21	000670240039	000670240284	8 PMED
22	000980120017	000980120070	8 PMED
23	000980120017	000980120094	1 MVIS
24	000980120017	000980120107	8 PMED
25	000980120017	000980120114	8 PMED
26	001660440018	001660440028	1 MVIS
27	001660440018	001660440100	8 PMED
28	001860600013	001860600064	1 MVIS
29	001860600013	001860600071	8 PMED
30	001860600013	001860600095	8 PMED
31	001860600013	001860600108	8 PMED
32	001860600013	001860600122	1 MVIS
33	001860600013	001860600146	8 PMED
34	001860600013	001860600160	8 PMED
35	001860600013	001860600191	8 PMED
36	001860600013	001860600211	8 PMED
37	001860600013	001860600228	8 PMED
38	002360270026	002360270229	1 MVIS
39	002360270026	002360270236	1 MVIS
40	002360270026	002360270243	1 MVIS
41	002360270026	002360270250	1 MVIS
42	002360270026	002360270274	8 PMED
43	002360270026	002360270298	8 PMED
44	002360270026	002360270318	8 PMED
45	002360270026	002360270349	8 PMED
46	002360270026	002360270356	8 PMED
47	002360270026	002360270387	8 PMED
48	002360270026	002360270445	8 PMED
49	002550290027	002550290309	8 PMED
50	002550290027	002550290316	8 PMED

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

```
                OBS     EVNTIDX         EVENTYPE

                  1    000050480059     1 MVIS
                  2    000050480066     1 MVIS
                  3    000050480073     8 PMED
                  4    000050480080     8 PMED
                  5    000050480097     8 PMED
                  6    000200350300     1 MVIS
                  7    000200350317     1 MVIS
                  8    000200350444     8 PMED
                  9    000200350475     8 PMED
                 10    000200350502     8 PMED
                 11    000200350519     8 PMED
                 12    000650110735     8 PMED
                 13    000650110766     1 MVIS
                 14    000650110855     4 STAZ
                 15    000650110906     8 PMED
                 16    000670240239     1 MVIS
                 17    000670240246     1 MVIS
                 18    000670240253     8 PMED
                 19    000670240260     8 PMED
                 20    000670240277     8 PMED
                 21    000670240284     8 PMED
                 22    000980120070     8 PMED
                 23    000980120094     1 MVIS
                 24    000980120107     8 PMED
                 25    000980120114     8 PMED
                 26    001660440028     1 MVIS
                 27    001660440100     8 PMED
                 28    001860600064     1 MVIS
                 29    001860600071     8 PMED
                 30    001860600095     8 PMED
                 31    001860600108     8 PMED
                 32    001860600122     1 MVIS
                 33    001860600146     8 PMED
                 34    001860600160     8 PMED
                 35    001860600191     8 PMED
                 36    001860600211     8 PMED
                 37    001860600228     8 PMED
                 38    002360270229     1 MVIS
                 39    002360270236     1 MVIS
                 40    002360270243     1 MVIS
                 41    002360270250     1 MVIS
                 42    002360270274     8 PMED
                 43    002360270298     8 PMED
                 44    002360270318     8 PMED
                 45    002360270349     8 PMED
                 46    002360270356     8 PMED
                 47    002360270387     8 PMED
                 48    002360270445     8 PMED
                 49    002550290309     8 PMED
                 50    002550290316     8 PMED
```

Friday, June 8, 2001   6

Sample SAS Job for Example A
sample print of work.asmvis
unique evntidxs from work.asclnks that are non-telephone MVIS (HC-016G) events

```
OBS        EVNTIDX         EVENTYPE

  1      000050480059      1 MVIS
  2      000050480066      1 MVIS
  3      000200350300      1 MVIS
  4      000200350317      1 MVIS
  5      000650110766      1 MVIS
  6      000670240239      1 MVIS
  7      000670240246      1 MVIS
  8      000980120094      1 MVIS
  9      001660440028      1 MVIS
 10      001860600064      1 MVIS
 11      001860600122      1 MVIS
 12      002360270229      1 MVIS
 13      002360270236      1 MVIS
 14      002360270243      1 MVIS
 15      002360270250      1 MVIS
 16      002550290323      1 MVIS
 17      003050120460      1 MVIS
 18      003050120477      1 MVIS
 19      003620310090      1 MVIS
 20      003620310141      1 MVIS
 21      003620310216      1 MVIS
 22      003660480132      1 MVIS
 23      003660480149      1 MVIS
 24      004060270664      1 MVIS
 25      004170230312      1 MVIS
 26      004500450049      1 MVIS
 27      004500450056      1 MVIS
 28      004630460176      1 MVIS
 29      004630460183      1 MVIS
 30      004630460190      1 MVIS
 31      004670210063      1 MVIS
 32      004670210070      1 MVIS
 33      004670210087      1 MVIS
 34      004840520243      1 MVIS
 35      004840520250      1 MVIS
 36      004840520274      1 MVIS
 37      004840520281      1 MVIS
 38      004840520298      1 MVIS
 39      004840520301      1 MVIS
 40      004840520318      1 MVIS
 41      004840520325      1 MVIS
 42      006760120156      1 MVIS
 43      006960390514      1 MVIS
 44      006960390538      1 MVIS
 45      007030280762      1 MVIS
 46      007030281063      1 MVIS
 47      007030281070      1 MVIS
 48      007030281183      1 MVIS
 49      007210140434      1 MVIS
 50      007210140441      1 MVIS
```

ATTACHMENT 2   **A2-13**   **MEPS HC-016I**

Sample SAS Job for Example A
sample print of work.rxlk - sorted by eventidx
Rx+event link file records (HC-16IF2)

EVNTIDX	LINKIDX	EVENTYPE
000020250058	000020250065	1 MVIS
000020320065	000020320072	1 MVIS
000020320109	000020320116	1 MVIS
000020490161	000020490178	1 MVIS
000030220550	000030220567	4 STAZ
	000030220574	4 STAZ
	000030220581	4 STAZ
	000030220598	4 STAZ
000040550013	000040550020	2 OPAT
000050110120	000050110151	1 MVIS
000050110226	000050110257	1 MVIS
000050170333	000050170460	3 EROM
	000050170477	3 EROM
000050170408	000050170484	1 MVIS
000050170580	000050170768	1 MVIS
000050170597	000050170775	1 MVIS
	000050170782	1 MVIS
000050170648	000050170768	2 OPAT
000050170655	000050170768	2 OPAT
000050170693	000050170799	1 MVIS
000050170720	000050170802	1 MVIS
	000050170819	1 MVIS
000050170737	000050170826	1 MVIS
	000050170833	1 MVIS
000050170744	000050170840	1 MVIS
	000050170857	1 MVIS
000050170751	000050170864	3 EROM
000050171069	000050171103	1 MVIS
	000050171110	1 MVIS
	000050171127	1 MVIS

HC-016I   08:55

Sample SAS Job for Example A
sample print of work.rxlk - sorted by eventidx
Rx+event link file records (HC-16IF2)

EVNTIDX	LINKIDX	EVENTYPE
000050240100	000050240148	3 EROM
000050240155	000050240179	1 MVIS
000050240162	000050240186	5 DVIS
000050240193	000050240213	1 MVIS
	000050240220	1 MVIS
000050240206	000050240237	1 MVIS
000050310042	000050310059	1 MVIS
000050310066	000050310148	1 MVIS
000050310131	000050310148	2 OPAT
	000050310155	2 OPAT
	000050310162	2 OPAT
000050480011	000050480028	1 MVIS
	000050480035	1 MVIS
000050480059	000050480073	1 MVIS
000050480066	000050480080	1 MVIS
	000050480097	1 MVIS
000060180163	000060180290	4 STAZ
	000060180303	4 STAZ
	000060180310	4 STAZ
	000060180327	4 STAZ
	000060180334	4 STAZ
000060180170	000060180303	4 STAZ
	000060180310	4 STAZ
	000060180327	4 STAZ
	000060180334	4 STAZ
000060180252	000060180269	6 OMED
000060180276	000060180283	6 OMED
000060180341	000060180512	1 MVIS
	000060180529	1 MVIS
	000060180536	1 MVIS
000060180492	000060180505	6 OMED
000070240264	000070240315	1 MVIS

HC-016I   08:55

Sample SAS Job for Example A
sample print of work.rxlk - sorted by eventidx
Rx+event link file records (HC-16IF2)

EVNTIDX	LINKIDX	EVENTYPE
000070240264	000070240322	1 MVIS
	000070240339	1 MVIS
	000070240346	1 MVIS
	000070240353	1 MVIS
	000070240360	1 MVIS
000100150357	000100150395	5 DVIS
	000100150408	5 DVIS
000100150422	000100150460	1 MVIS
000100150439	000100150477	1 MVIS
	000100150484	1 MVIS
000100150446	000100150477	1 MVIS
	000100150484	1 MVIS
	000100150491	1 MVIS
000100150511	000100150528	6 OMED
000100220213	000100220244	1 MVIS
	000100220251	1 MVIS
	000100220268	1 MVIS
	000100220275	1 MVIS
000100220299	000100220319	1 MVIS
	000100220326	1 MVIS
	000100220333	1 MVIS
	000100220340	1 MVIS
	000100220357	1 MVIS
	000100220364	1 MVIS
000100220302	000100220326	1 MVIS
	000100220340	1 MVIS
	000100220364	1 MVIS
000110110093	000110110120	1 MVIS
000110110137	000110110315	1 MVIS
000110110271	000110110322	1 MVIS
000110110295	000110110322	2 OPAT
000110120129	000110120218	1 MVIS
000110290174	000110290181	5 DVIS
000120190069	000120190083	3 EROM

Sample SAS Job for Example A
sample print of work.rxlk - sorted by eventidx
Rx+event link file records (HC-16IF2)

EVNTIDX	LINKIDX	EVENTYPE
000120190069	000120190090	3 EROM
000120260045	000120260052	4 STAZ
	000120260069	4 STAZ
	000120260076	4 STAZ
000130190362	000130190468	1 MVIS
000130190475	000130190468	1 MVIS
000130190622	000130190677	1 MVIS
	000130190684	1 MVIS
000150220386	000150220502	3 EROM
	000150220519	3 EROM
000180730041	000180730089	2 OPAT
000200110211	000200110204	1 MVIS
000200280184	000200280191	3 EROM
	000200280204	3 EROM
000200350160	000200350386	5 DVIS
000200350184	000200350393	1 MVIS
000200350204	000200350413	1 MVIS
000200350211	000200350420	3 EROM
000200350242	000200350437	1 MVIS
000200350300	000200350444	1 MVIS
	000200350475	1 MVIS
000200350348	000200350482	1 MVIS
000200350355	000200350499	1 MVIS
000200350406	000200350413	1 MVIS
000200350526	000200350595	1 MVIS
000200350557	000200350608	1 MVIS
000230160229	000230160243	1 MVIS
	000230160250	1 MVIS

HC-016I   08:55

Sample SAS Job for Example A
sample print of work.rxlk - sorted by eventidx
Rx+event link file records (HC-16IF2)

```
        EVNTIDX          LINKIDX         EVENTYPE

     000230230072     000230230089      1 MVIS

     000240120016     000240120136      1 MVIS
                      000240120143      1 MVIS
                      000240120150      1 MVIS
                      000240120167      1 MVIS
                      000240120174      1 MVIS
                      000240120181      1 MVIS

     000240120085     000240120198      1 MVIS

     000240120105     000240120198      1 MVIS

     000240120129     000240120136      4 STAZ
                      000240120143      4 STAZ

     000240130104     000240130111      6 OMED

     000240370015     000240370022      1 MVIS
                      000240370039      1 MVIS

     000310100133     000310100157      3 EROM

     000310100164     000310100171      1 MVIS
```

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

EVNTIDX	LINKIDX	EVENTYPE
000050480059	000050480073	1 MVIS
000050480066	000050480080	1 MVIS
	000050480097	1 MVIS
000200350300	000200350444	1 MVIS
	000200350475	1 MVIS
000650110766	000650110906	1 MVIS
000670240239	000670240253	1 MVIS
	000670240260	1 MVIS
	000670240277	1 MVIS
	000670240284	1 MVIS
000980120094	000980120107	1 MVIS
001660440028	001660440100	1 MVIS
	001660440117	1 MVIS
001860600064	001860600071	1 MVIS
	001860600088	1 MVIS
	001860600095	1 MVIS
	001860600108	1 MVIS
	001860600115	1 MVIS
001860600122	001860600146	1 MVIS
	001860600153	1 MVIS
	001860600160	1 MVIS
	001860600177	1 MVIS
	001860600184	1 MVIS
002360270229	002360270274	1 MVIS
	002360270281	1 MVIS
002550290323	002550290330	1 MVIS
003050120477	003050120559	1 MVIS
	003050120566	1 MVIS
	003050120573	1 MVIS
	003050120580	1 MVIS
003620310141	003620310172	1 MVIS
003660480132	003660480156	1 MVIS
	003660480163	1 MVIS
003660480149	003660480170	1 MVIS

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

EVNTIDX	LINKIDX	EVENTYPE
004060270664	004060270671	1 MVIS
	004060270688	1 MVIS
	004060270695	1 MVIS
	004060270708	1 MVIS
004170230312	004170230343	1 MVIS
004500450049	004500450032	1 MVIS
004500450056	004500450032	1 MVIS
004670210063	004670210094	1 MVIS
004840520243	004840520349	1 MVIS
006760120156	006760120187	1 MVIS
	006760120194	1 MVIS
006960390514	006960390576	1 MVIS
007030280762	007030280899	1 MVIS
	007030280902	1 MVIS
	007030280919	1 MVIS
	007030280926	1 MVIS

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

OBS	EVNTIDX	LINKIDX	EVENTYPE
1	000050480059	000050480073	1 MVIS
2	000050480066	000050480080	1 MVIS
3	000050480066	000050480097	1 MVIS
4	000200350300	000200350444	1 MVIS
5	000200350300	000200350475	1 MVIS
6	000650110766	000650110906	1 MVIS
7	000670240239	000670240253	1 MVIS
8	000670240239	000670240260	1 MVIS
9	000670240239	000670240277	1 MVIS
10	000670240239	000670240284	1 MVIS
11	000980120094	000980120107	1 MVIS
12	001660440028	001660440100	1 MVIS
13	001660440028	001660440117	1 MVIS
14	001860600064	001860600071	1 MVIS
15	001860600064	001860600088	1 MVIS
16	001860600064	001860600095	1 MVIS
17	001860600064	001860600108	1 MVIS
18	001860600064	001860600115	1 MVIS
19	001860600122	001860600146	1 MVIS
20	001860600122	001860600153	1 MVIS
21	001860600122	001860600160	1 MVIS
22	001860600122	001860600177	1 MVIS
23	001860600122	001860600184	1 MVIS
24	002360270229	002360270274	1 MVIS
25	002360270229	002360270281	1 MVIS
26	002550290323	002550290330	1 MVIS
27	003050120477	003050120559	1 MVIS
28	003050120477	003050120566	1 MVIS
29	003050120477	003050120573	1 MVIS
30	003050120477	003050120580	1 MVIS
31	003620310141	003620310172	1 MVIS
32	003660480132	003660480156	1 MVIS
33	003660480132	003660480163	1 MVIS
34	003660480149	003660480170	1 MVIS
35	004060270664	004060270671	1 MVIS
36	004060270664	004060270688	1 MVIS
37	004060270664	004060270695	1 MVIS
38	004060270664	004060270708	1 MVIS
39	004170230312	004170230343	1 MVIS
40	004500450049	004500450032	1 MVIS
41	004500450056	004500450032	1 MVIS
42	004670210063	004670210094	1 MVIS
43	004840520243	004840520349	1 MVIS
44	006760120156	006760120187	1 MVIS
45	006760120156	006760120194	1 MVIS
46	006960390514	006960390576	1 MVIS
47	007030280762	007030280899	1 MVIS
48	007030280762	007030280902	1 MVIS
49	007030280762	007030280919	1 MVIS
50	007030280762	007030280926	1 MVIS

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

OBS	LINKIDX
1	000050480073
2	000050480080
3	000050480097
4	000200350444
5	000200350475
6	000650110906
7	000670240253
8	000670240260
9	000670240277
10	000670240284
11	000980120107
12	001660440100
13	001660440117
14	001860600071
15	001860600088
16	001860600095
17	001860600108
18	001860600115
19	001860600146
20	001860600153
21	001860600160
22	001860600177
23	001860600184
24	002360270274
25	002360270281
26	002550290330
27	003050120559
28	003050120566
29	003050120573
30	003050120580
31	003620310172
32	003660480156
33	003660480163
34	003660480170
35	004060270671
36	004060270688
37	004060270695
38	004060270708
39	004170230343
40	004500450032
41	004670210094
42	004840520349
43	006760120187
44	006760120194
45	006960390576
46	007030280899
47	007030280902
48	007030280919
49	007030280926
50	007030280933

Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-016A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
000050480073	000050480073001	AMOXICILLIN	6.86	5750.52
	000050480073002	AMOXICILLIN	6.86	5750.52
000050480080	000050480080001	ALBUTEROL	18.69	5750.52
	000050480080002	ALBUTEROL	18.69	5750.52
000050480097	000050480097001	PEDIAPRED	7.56	5750.52
000200350444	000200350444001	VANCERIL	32.59	4878.72
000200350475	000200350475001	PROVENTIL HFA	29.48	4878.72
000650110906	000650110906001	CORTISPORIN	32.98	9499.40
000670240253	000670240253001	AMOXICILLIN 250/5ML	14.12	3696.38
000670240260	000670240260001	CROMOLYN 20MG/2ML	42.00	3696.38
000670240277	000670240277001	ALBUTEROL 0.5%	20.25	3696.38
000670240284	000670240284001	PRELONE 15MG/5ML SYRUP*480 ML	43.17	3696.38
000980120107	000980120107001	THEOPHYLLINE	30.42	8256.38
	000980120107002	THEOPHYLLINE	30.42	8256.38
	000980120107003	THEOPHYLLINE	30.42	8256.38
	000980120107004	THEOPHYLLINE	30.42	8256.38
	000980120107005	THEOPHYLLINE	30.42	8256.38
	000980120107006	THEOPHYLLINE	30.42	8256.38
	000980120107007	THEOPHYLLINE	30.42	8256.38
001660440100	001660440100001	VENTOLIN	54.98	10815.33
	001660440100002	VENTOLIN	54.98	10815.33
	001660440100003	VENTOLIN	54.98	10815.33
001660440117	001660440117001	BACTRIM-DS	12.38	10815.33
001860600071	001860600071001	THEO-DUR	35.65	13491.42
001860600088	001860600088001	HYZAAR	54.60	13491.42
	001860600088002	HYZAAR	54.60	13491.42
001860600095	001860600095001	ALBUTEROL	11.86	13491.42
	001860600095002	ALBUTEROL	11.86	13491.42
	001860600095003	ALBUTEROL	11.86	13491.42
001860600108	001860600108001	AEROBID	56.80	13491.42
	001860600108002	AEROBID	56.80	13491.42
	001860600108003	AEROBID	56.80	13491.42

                             Sample SAS Job for Example A
                             sample print of work.mvpmeds
                PMED (HC-016A) records for unique linkidxs in work.pmedids

        LINKIDX   RXRECIDX   RXNAME   RXXP97X   WTDPER97

      001860600115   001860600115001   NORVASC   30.15   13491.42
                      001860600115002   NORVASC   30.15   13491.42
                      001860600115003   NORVASC   30.15   13491.42
                      001860600115004   NORVASC   30.15   13491.42
                      001860600115005   NORVASC   30.15   13491.42

      001860600146   001860600146001   THEO-DUR   35.65   13491.42
                      001860600146002   THEO-DUR   35.65   13491.42
                      001860600146003   THEO-DUR   35.65   13491.42
                      001860600146004   THEO-DUR   35.65   13491.42
                      001860600146005   THEO-DUR   35.65   13491.42

      001860600153   001860600153001   HYZAAR   56.35   13491.42
                      001860600153002   HYZAAR   56.35   13491.42
                      001860600153003   HYZAAR   57.55   13491.42
                      001860600153004   HYZAAR   56.35   13491.42
                      001860600153005   HYZAAR   52.93   13491.42

      001860600160   001860600160001   ALBUTEROL   5.92   13491.42
                      001860600160002   ALBUTEROL   5.92   13491.42
                      001860600160003   ALBUTEROL   5.92   13491.42
                      001860600160004   ALBUTEROL   5.92   13491.42
                      001860600160005   ALBUTEROL   5.92   13491.42

      001860600177   001860600177001   AEROBID   56.80   13491.42
                      001860600177002   AEROBID   56.80   13491.42
                      001860600177003   AEROBID   56.80   13491.42
                      001860600177004   AEROBID   56.80   13491.42
                      001860600177005   AEROBID   56.80   13491.42

      001860600184   001860600184001   NORVASC   30.15   13491.42
                      001860600184002   NORVASC   30.15   13491.42
                      001860600184003   NORVASC   30.15   13491.42
                      001860600184004   NORVASC   30.15   13491.42
                      001860600184005   NORVASC   30.15   13491.42

      002360270274   002360270274001   ALBUTEROL   14.60   9769.91

      002360270281   002360270281001   PREMPRO   20.51   9769.91
                      002360270281002   PREMPRO   20.51   9769.91

      002550290330   002550290330001   PREDNISONE   12.49   14080.51

      003050120559   003050120559001   ZITHROMAX   37.31   4941.63

      003050120566   003050120566001   ZESTRIL   84.54   4941.63

      003050120573   003050120573001   VERAPAMIL HCL SR   122.80   4941.63
                      003050120573002   VERAPAMIL HCL SR   122.80   4941.63

Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-016A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
003050120580	003050120580001	DELTASONE	0.29	4941.63
003620310172	003620310172001	CLARITIN	58.75	4140.07
003660480156	003660480156001	ALBUTEROL	16.98	1097.88
003660480163	003660480163001	TRIMOX	11.39	1097.88
003660480170	003660480170001	PREDNISONE	7.08	1097.88
004060270671	004060270671001	HABITROL 21MG PATCH	56.82	2303.92
	004060270671002	HABITROL 21MG PATCH	56.82	2303.92
004060270688	004060270688001	PROMETHAZINE/CODEINE	13.49	2303.92
004060270695	004060270695001	BIAXIN	40.29	2303.92
004060270708	004060270708001	PREDNISONE	6.98	2303.92
004170230343	004170230343001	HISTINEX DM	9.28	10636.31
	004170230343002	HISTINEX DM	9.37	10636.31
004500450032	004500450032001	INHALER	31.02	7954.54
	004500450032002	INHALER	31.02	7954.54
	004500450032003	INHALER	31.02	7954.54
004670210094	004670210094001	ALBUTEROL	7.19	12912.96
	004670210094002	ALBUTEROL	7.19	12912.96
	004670210094003	ALBUTEROL	7.19	12912.96
	004670210094004	ALBUTEROL	7.19	12912.96
004840520349	004840520349001	BRONCHO SALINE	9.45	1734.86
	004840520349002	BRONCHO SALINE	9.45	1734.86
	004840520349003	BRONCHO SALINE	9.45	1734.86
	004840520349004	BRONCHO SALINE	9.45	1734.86
	004840520349005	BRONCHO SALINE	9.45	1734.86
006760120187	006760120187001	ALBUTEROL	19.69	5122.63
006760120194	006760120194001	-9	6.25	5122.63
	006760120194002	-9	6.25	5122.63
006960390576	006960390576001	ALBUTEROL	26.49	1580.88
	006960390576002	ALBUTEROL	26.49	1580.88
	006960390576003	ALBUTEROL	26.49	1580.88
	006960390576004	ALBUTEROL	26.49	1580.88
	006960390576005	ALBUTEROL	26.49	1580.88
	006960390576006	ALBUTEROL	26.49	1580.88
	006960390576007	ALBUTEROL	26.49	1580.88

Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-016A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
007030280899	007030280899001	AZMACORT	40.23	6223.48
007030280902	007030280902001	RELAFEN	65.98	6223.48
	007030280902002	RELAFEN	65.98	6223.48
	007030280902003	RELAFEN	65.98	6223.48
007030280919	007030280919001	TILADE	26.26	6223.48
007030280926	007030280926001	SEREVENT INHALER	55.48	6223.48
007030280933	007030280933001	PHRENILIN	8.04	6223.48
007030281169	007030281169001	GUAIFENESIN LA	12.42	6223.48
007030281176	007030281176001	PREDNISONE	12.27	6223.48
	007030281176002	PREDNISONE	12.27	6223.48
007030281190	007030281190001	NOLAMINE	18.77	6223.48
007640120815	007640120815001	METHYLPREDNISOLONE	9.08	6906.32
007640120822	007640120822001	AZMACORT	40.54	6906.32
007640120839	007640120839001	CLINDAMYCIN	16.99	6906.32
007870290328	007870290328001	VERAPAMIL 180MG SR	31.69	10376.27
	007870290328002	VERAPAMIL 180MG SR	31.69	10376.27
	007870290328003	VERAPAMIL 180MG SR	31.69	10376.27
	007870290328004	VERAPAMIL 180MG SR	31.69	10376.27
007870290335	007870290335001	PAXIL 20MG TABLETS	58.99	10376.27
007950160807	007950160807001	FUROSEMIDE	4.89	4655.28
	007950160807002	FUROSEMIDE	4.89	4655.28
	007950160807003	FUROSEMIDE	4.89	4655.28
	007950160807004	FUROSEMIDE	4.89	4655.28
	007950160807005	FUROSEMIDE	4.89	4655.28
	007950160807006	FUROSEMIDE	4.89	4655.28
007950160821	007950160821001	SLO-BID	13.52	4655.28
	007950160821002	SLO-BID	13.52	4655.28
	007950160821003	SLO-BID	81.15	4655.28
	007950160821004	SLO-BID	81.15	4655.28
	007950160821005	SLO-BID	13.52	4655.28
	007950160821006	SLO-BID	81.15	4655.28
007950160838	007950160838001	LANOXIN	6.27	4655.28
	007950160838002	LANOXIN	5.50	4655.28

HC-016I   08:55

Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-016A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
007950160852	007950160852001	POTASSIUM CHLORID	10.69	4655.28
007950160934	007950160934001	SULFAMETH/TRIMETH	5.13	4655.28
	007950160934002	SULFAMETH/TRIMETH	5.13	4655.28
008540420281	008540420281001	CLARITIN	62.49	23783.33
008540420298	008540420298001	ALBUTEROL	21.41	23783.33
008580330096	008580330096001	ALBUTEROL	87.74	4805.32
	008580330096002	ALBUTEROL	87.74	4805.32
008600260194	008600260194001	CIPRO 500MG	54.35	8648.82
009780360459	009780360459001	ALBUTEROL	9.89	10194.95
	009780360459002	ALBUTEROL	9.89	10194.95
	009780360459003	ALBUTEROL	9.89	10194.95
009780360466	009780360466001	AUGMENTIN	145.99	10194.95
009780360473	009780360473001	HYDROPHILIC	10.35	10194.95
009780360480	009780360480001	ALBUTEROL	26.94	10194.95
009780360497	009780360497001	ALBUTEROL INHALER	18.95	10194.95
	009780360497002	ALBUTEROL INHALER	18.95	10194.95
009780360500	009780360500001	LIQUID PRED	67.84	10194.95
	009780360500002	LIQUID PRED	67.84	10194.95
009780360517	009780360517001	FLONASE NASAL SPRAY	42.77	10194.95
009780360524	009780360524001	INSPIREASE	26.50	10194.95
009780360555	009780360555001	PREDNISONE	4.25	10194.95
009910150101	009910150101001	SECONDARY SET	30.24	5316.23
	009910150101002	SECONDARY SET	30.24	5316.23
	009910150101003	SECONDARY SET	30.24	5316.23
010900170741	010900170741001	PREDNISONE	4.75	7319.51
010900170950	010900170950001	VANCENASE AQ NASAL S	53.00	7319.51
	010900170950002	VANCENASE AQ NASAL S	53.00	7319.51
011400270139	011400270139001	VASOTEC	36.60	3993.36
011400270191	011400270191001	HYDROCHLORTHIAZIDE	5.98	3993.36

Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-016A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
011400270204	011400270204001	POTASSIUM CL	8.99	3993.36
011400270211	011400270211001	VASOTEC	66.76	3993.36
011400270228	011400270228001	TIAZAC	63.29	3993.36
012060320213	012060320213001	INTAL INHALER	42.90	506.65
	012060320213002	INTAL INHALER	42.90	506.65
	012060320213003	INTAL INHALER	42.90	506.65
012060320220	012060320220001	PROVENTIL	5.00	506.65
	012060320220002	PROVENTIL	5.00	506.65
	012060320220003	PROVENTIL	5.00	506.65
012060550156	012060550156001	AMOXICILLIN	10.18	433.76
	012060550156002	AMOXICILLIN	10.18	433.76
012080171145	012080171145001	THICK-IT	8.58	6713.27
	012080171145002	THICK-IT	8.58	6713.27
	012080171145003	THICK-IT	8.58	6713.27
	012080171145004	THICK-IT	8.58	6713.27
012080171152	012080171152001	BRETHINE	121.68	6713.27
	012080171152002	BRETHINE	121.68	6713.27
	012080171152003	BRETHINE	121.68	6713.27
	012080171152004	BRETHINE	121.68	6713.27
012080171169	012080171169001	AEROBID INHALER	58.76	6713.27
	012080171169002	AEROBID INHALER	58.76	6713.27
	012080171169003	AEROBID INHALER	58.76	6713.27
	012080171169004	AEROBID INHALER	58.76	6713.27
012080171176	012080171176001	ATROVENT INHALER	29.96	6713.27
	012080171176002	ATROVENT INHALER	29.96	6713.27
	012080171176003	ATROVENT INHALER	29.96	6713.27
	012080171176004	ATROVENT INHALER	29.96	6713.27
012080171183	012080171183001	ALBUTERAL INHALER	62.52	6713.27
	012080171183002	ALBUTERAL INHALER	62.52	6713.27
	012080171183003	ALBUTERAL INHALER	62.52	6713.27
	012080171183004	ALBUTERAL INHALER	62.52	6713.27
012260410098	012260410098001	PROMETHAZINE VC	5.36	7490.09
012260410101	012260410101001	ALBUTEROL	5.72	7490.09
012260410118	012260410118001	AMOXICILLIN	14.60	7490.09

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

Analysis Variable : RXXP97X SUM OF PAYMENTS RXSF97X-RXOU97X(IMPUTED)

```
        N          Sum
    ------------------
    3611     116979.44
    ------------------
```

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

Weighted

Analysis Variable : RXXP97X SUM OF PAYMENTS RXSF97X-RXOU97X(IMPUTED)

```
          N           Sum
      ------------------
      3611      778395095
      ------------------
```

```
1                                          The SAS System                           15:34 Thursday, June 7,
2001

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1              OPTIONS LS=132 PS=59;
2
3              TITLE1 "HC-016I";
4              TITLE2 'Sample SAS Job for Example B';
5
6              LIBNAME IN 'D:\';
NOTE: Libref IN was successfully assigned as follows:
      Engine:        V603
      Physical Name: D:\
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: The PROCEDURE FORMAT used 0.33 seconds.


22
23             *------------------------------------------------------------------------------------
24             * Get condition records coded as asthma.
25             *-----------------------------------------------------------------------------------;
26             DATA ASCONDS;
27               SET IN.H18 (KEEP=CONDIDX CCCODEX);
28               IF CCCODEX="128";
29             RUN;

NOTE: The data set WORK.ASCONDS has 1763 observations and 2 variables.
NOTE: The DATA statement used 28.28 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: The data set WORK.ASCONDS has 1763 observations and 2 variables.
NOTE: The PROCEDURE SORT used 0.44 seconds.
```

```
35
36          proc print data=asconds (obs=50);
37             title3 "sample print of work.asconds - sorted by condidx";
38             title4 "COND (H18) records where cccodex=128";
39          run;
```

NOTE: The PROCEDURE PRINT printed page 1.
NOTE: The PROCEDURE PRINT used 0.44 seconds.

```
40
41          PROC SORT DATA=IN.H16IF1 OUT=CLNK; BY CONDIDX; RUN;
```

NOTE: The data set WORK.CLNK has 310651 observations and 5 variables.
NOTE: The PROCEDURE SORT used 53.22 seconds.

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

NOTE: The data set WORK.ASCLNKS has 6789 observations and 3 variables.
NOTE: The DATA statement used 16.64 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: The PROCEDURE PRINT printed pages 2-3.
NOTE: The PROCEDURE PRINT used 0.44 seconds.

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

NOTE: The data set WORK.ASCLNKS has 6789 observations and 3 variables.
NOTE: The PROCEDURE SORT used 0.77 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: The PROCEDURE PRINT printed page 4.

NOTE: The PROCEDURE PRINT used 0.05 seconds.


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

NOTE: The data set WORK.ASCLNKS has 6751 observations and 2 variables.
NOTE: The DATA statement used 0.48 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: The PROCEDURE PRINT printed page 5.
NOTE: The PROCEDURE PRINT used 0.11 seconds.


```
75
76          *------------------------------------------------------------------------------
77          * Get PMED records linked to asthma condition records.
78          *------------------------------------------------------------------------------;
79          PROC SORT DATA=IN.H16A OUT=PMED; BY LINKIDX; RUN;
```

NOTE: The data set WORK.PMED has 234532 observations and 54 variables.
NOTE: The PROCEDURE SORT used 2 minutes 39.28 seconds.


```
80
81          DATA ASPMEDS;
82            MERGE PMED (KEEP=LINKIDX RXRECIDX RXNAME RXXP97X  WTDPER97)
83                  ASCLNKS (IN=INASCLNK KEEP=EVNTIDX RENAME=(EVNTIDX=LINKIDX));
84            BY LINKIDX;
85            IF INASCLNK & WTDPER97>0;
86          RUN;
```

NOTE: The data set WORK.ASPMEDS has 8642 observations and 5 variables.
NOTE: The DATA statement used 28.73 seconds.


```
87
88          proc print data=aspmeds (obs=300);
89            by linkidx;
90            id linkidx;
91            var rxrecidx rxname RXXP97X  WTDPER97;
92            title3 "sample print of work.aspmeds";
93            title4 "PMED (HC-016A) records which link to condition records coded as asthma";
94          run;
```

NOTE: The PROCEDURE PRINT printed pages 6-14.
NOTE: The PROCEDURE PRINT used 0.05 seconds.

```
95
96          PROC MEANS DATA=ASPMEDS N SUM;
97            VAR RXXP97X;
98            TITLE3 "Total Rx expenditures associated with asthma";
99          RUN;
```

NOTE: The PROCEDURE MEANS printed page 15.
NOTE: The PROCEDURE MEANS used 0.32 seconds.

```
100
101         PROC MEANS DATA=ASPMEDS N SUM;
102           VAR RXXP97X;
103           WEIGHT WTDPER97;
104           TITLE3 "Total Rx expenditures associated with asthma";
105           TITLE5 "Weighted";
106         RUN;
```

NOTE: The PROCEDURE MEANS printed page 16.
NOTE: The PROCEDURE MEANS used 0.05 seconds.

```
107
108
```

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

Sample SAS Job for Example B
sample print of work.asconds - sorted by condidx
COND (H18) records where cccodex=128

OBS	CONDIDX	CCCODEX
1	000040320014	128
2	000050480022	128
3	000050480038	128
4	000200350110	128
5	000650110054	128
6	000670240039	128
7	000850580014	128
8	000980120017	128
9	001170160082	128
10	001660130011	128
11	001660370019	128
12	001660440018	128
13	001830490013	128
14	001860600013	128
15	001900110024	128
16	002360270026	128
17	002400120025	128
18	002550290027	128
19	003050120030	128
20	003210280044	128
21	003210280135	128
22	003320230104	128
23	003370680016	128
24	003430100019	128
25	003470170019	128
26	003540170016	128
27	003620170023	128
28	003620310015	128
29	003660480029	128
30	003770240045	128
31	004060270035	128
32	004060340103	128
33	004160280015	128
34	004170230124	128
35	004370110021	128
36	004500450016	128
37	004630460039	128
38	004670210023	128
39	004840520061	128
40	005030330030	128
41	005060320036	128
42	005070320015	128
43	005260160028	128
44	005300270020	128
45	005670410030	128
46	005690210026	128
47	005710290049	128
48	005720150043	128
49	005720150093	128
50	005720390063	128

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

CONDIDX	EVNTIDX	EVENTYPE
000050480022	000050480059	1 MVIS
	000050480066	1 MVIS
	000050480073	8 PMED
000050480038	000050480080	8 PMED
	000050480097	8 PMED
000200350110	000200350300	1 MVIS
	000200350317	1 MVIS
	000200350444	8 PMED
	000200350475	8 PMED
	000200350502	8 PMED
	000200350519	8 PMED
000650110054	000650110735	8 PMED
	000650110766	1 MVIS
	000650110855	4 STAZ
	000650110906	8 PMED
000670240039	000670240239	1 MVIS
	000670240246	1 MVIS
	000670240253	8 PMED
	000670240260	8 PMED
	000670240277	8 PMED
	000670240284	8 PMED
000980120017	000980120070	8 PMED
	000980120094	1 MVIS
	000980120107	8 PMED
	000980120114	8 PMED
001660440018	001660440028	1 MVIS
	001660440100	8 PMED
001860600013	001860600064	1 MVIS
	001860600071	8 PMED
	001860600095	8 PMED
	001860600108	8 PMED
	001860600122	1 MVIS
	001860600146	8 PMED
	001860600160	8 PMED
	001860600191	8 PMED
	001860600211	8 PMED
	001860600228	8 PMED
002360270026	002360270229	1 MVIS
	002360270236	1 MVIS
	002360270243	1 MVIS
	002360270250	1 MVIS

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

CONDIDX	EVNTIDX	EVENTYPE
002360270026	002360270274	8 PMED
	002360270298	8 PMED
	002360270318	8 PMED
	002360270349	8 PMED
	002360270356	8 PMED
	002360270387	8 PMED
	002360270445	8 PMED
002550290027	002550290309	8 PMED
	002550290316	8 PMED
	002550290323	1 MVIS
	002550290330	8 PMED
003050120030	003050120408	8 PMED
	003050120460	1 MVIS
	003050120477	1 MVIS
	003050120559	8 PMED
	003050120580	8 PMED
	003050120597	8 PMED
	003050120600	8 PMED
	003050120617	8 PMED
003320230104	003320230183	8 PMED
003540170016	003540170255	8 PMED
	003540170522	8 PMED
	003540170604	8 PMED
	003540170611	8 PMED
	003540170628	8 PMED
003620310015	003620310090	1 MVIS
	003620310127	8 PMED
	003620310141	1 MVIS
	003620310172	8 PMED
	003620310216	1 MVIS
	003620310223	8 PMED
003660480029	003660480132	1 MVIS
	003660480149	1 MVIS
	003660480156	8 PMED

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

OBS	CONDIDX	EVNTIDX	EVENTYPE
1	000050480022	000050480059	1 MVIS
2	000050480022	000050480066	1 MVIS
3	000050480022	000050480073	8 PMED
4	000050480038	000050480080	8 PMED
5	000050480038	000050480097	8 PMED
6	000200350110	000200350300	1 MVIS
7	000200350110	000200350317	1 MVIS
8	000200350110	000200350444	8 PMED
9	000200350110	000200350475	8 PMED
10	000200350110	000200350502	8 PMED
11	000200350110	000200350519	8 PMED
12	000650110054	000650110735	8 PMED
13	000650110054	000650110766	1 MVIS
14	000650110054	000650110855	4 STAZ
15	000650110054	000650110906	8 PMED
16	000670240039	000670240239	1 MVIS
17	000670240039	000670240246	1 MVIS
18	000670240039	000670240253	8 PMED
19	000670240039	000670240260	8 PMED
20	000670240039	000670240277	8 PMED
21	000670240039	000670240284	8 PMED
22	000980120017	000980120070	8 PMED
23	000980120017	000980120094	1 MVIS
24	000980120017	000980120107	8 PMED
25	000980120017	000980120114	8 PMED
26	001660440018	001660440028	1 MVIS
27	001660440018	001660440100	8 PMED
28	001860600013	001860600064	1 MVIS
29	001860600013	001860600071	8 PMED
30	001860600013	001860600095	8 PMED
31	001860600013	001860600108	8 PMED
32	001860600013	001860600122	1 MVIS
33	001860600013	001860600146	8 PMED
34	001860600013	001860600160	8 PMED
35	001860600013	001860600191	8 PMED
36	001860600013	001860600211	8 PMED
37	001860600013	001860600228	8 PMED
38	002360270026	002360270229	1 MVIS
39	002360270026	002360270236	1 MVIS
40	002360270026	002360270243	1 MVIS
41	002360270026	002360270250	1 MVIS
42	002360270026	002360270274	8 PMED
43	002360270026	002360270298	8 PMED
44	002360270026	002360270318	8 PMED
45	002360270026	002360270349	8 PMED
46	002360270026	002360270356	8 PMED
47	002360270026	002360270387	8 PMED
48	002360270026	002360270445	8 PMED
49	002550290027	002550290309	8 PMED
50	002550290027	002550290316	8 PMED

HC-016I   15:34

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

OBS	EVNTIDX	EVENTYPE
1	000050480059	1 MVIS
2	000050480066	1 MVIS
3	000050480073	8 PMED
4	000050480080	8 PMED
5	000050480097	8 PMED
6	000200350300	1 MVIS
7	000200350317	1 MVIS
8	000200350444	8 PMED
9	000200350475	8 PMED
10	000200350502	8 PMED
11	000200350519	8 PMED
12	000650110735	8 PMED
13	000650110766	1 MVIS
14	000650110855	4 STAZ
15	000650110906	8 PMED
16	000670240239	1 MVIS
17	000670240246	1 MVIS
18	000670240253	8 PMED
19	000670240260	8 PMED
20	000670240277	8 PMED
21	000670240284	8 PMED
22	000980120070	8 PMED
23	000980120094	1 MVIS
24	000980120107	8 PMED
25	000980120114	8 PMED
26	001660440028	1 MVIS
27	001660440100	8 PMED
28	001860600064	1 MVIS
29	001860600071	8 PMED
30	001860600095	8 PMED
31	001860600108	8 PMED
32	001860600122	1 MVIS
33	001860600146	8 PMED
34	001860600160	8 PMED
35	001860600191	8 PMED
36	001860600211	8 PMED
37	001860600228	8 PMED
38	002360270229	1 MVIS
39	002360270236	1 MVIS
40	002360270243	1 MVIS
41	002360270250	1 MVIS
42	002360270274	8 PMED
43	002360270298	8 PMED
44	002360270318	8 PMED
45	002360270349	8 PMED
46	002360270356	8 PMED
47	002360270387	8 PMED
48	002360270445	8 PMED
49	002550290309	8 PMED
50	002550290316	8 PMED

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-016A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
000050480073	000050480073001	AMOXICILLIN	6.86	5750.52
	000050480073002	AMOXICILLIN	6.86	5750.52
000050480080	000050480080001	ALBUTEROL	18.69	5750.52
	000050480080002	ALBUTEROL	18.69	5750.52
000050480097	000050480097001	PEDIAPRED	7.56	5750.52
000200350444	000200350444001	VANCERIL	32.59	4878.72
000200350475	000200350475001	PROVENTIL HFA	29.48	4878.72
000200350502	000200350502001	VANCERIL	52.78	4878.72
000200350519	000200350519001	SERVENT	53.73	4878.72
000650110735	000650110735001	NORVASC	37.82	9499.40
000650110906	000650110906001	CORTISPORIN	32.98	9499.40
000670240253	000670240253001	AMOXICILLIN 250/5ML	14.12	3696.38
000670240260	000670240260001	CROMOLYN 20MG/2ML	42.00	3696.38
000670240277	000670240277001	ALBUTEROL 0.5%	20.25	3696.38
000670240284	000670240284001	PRELONE 15MG/5ML SYRUP*480 ML	43.17	3696.38
000980120070	000980120070001	THEOPHYLLINE	16.21	8256.38
000980120107	000980120107001	THEOPHYLLINE	30.42	8256.38
	000980120107002	THEOPHYLLINE	30.42	8256.38
	000980120107003	THEOPHYLLINE	30.42	8256.38
	000980120107004	THEOPHYLLINE	30.42	8256.38
	000980120107005	THEOPHYLLINE	30.42	8256.38
	000980120107006	THEOPHYLLINE	30.42	8256.38
	000980120107007	THEOPHYLLINE	30.42	8256.38
000980120114	000980120114001	THEOPHYLLINE	30.44	8256.38
	000980120114002	THEOPHYLLINE	30.44	8256.38
	000980120114003	THEOPHYLLINE	30.44	8256.38
001660440100	001660440100001	VENTOLIN	54.98	10815.33
	001660440100002	VENTOLIN	54.98	10815.33
	001660440100003	VENTOLIN	54.98	10815.33
001860600071	001860600071001	THEO-DUR	35.65	13491.42
001860600095	001860600095001	ALBUTEROL	11.86	13491.42

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-016A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
001860600095	001860600095002	ALBUTEROL	11.86	13491.42
	001860600095003	ALBUTEROL	11.86	13491.42
001860600108	001860600108001	AEROBID	56.80	13491.42
	001860600108002	AEROBID	56.80	13491.42
	001860600108003	AEROBID	56.80	13491.42
001860600146	001860600146001	THEO-DUR	35.65	13491.42
	001860600146002	THEO-DUR	35.65	13491.42
	001860600146003	THEO-DUR	35.65	13491.42
	001860600146004	THEO-DUR	35.65	13491.42
	001860600146005	THEO-DUR	35.65	13491.42
001860600160	001860600160001	ALBUTEROL	5.92	13491.42
	001860600160002	ALBUTEROL	5.92	13491.42
	001860600160003	ALBUTEROL	5.92	13491.42
	001860600160004	ALBUTEROL	5.92	13491.42
	001860600160005	ALBUTEROL	5.92	13491.42
001860600191	001860600191001	THEO-DUR	35.65	13491.42
	001860600191002	THEO-DUR	35.65	13491.42
	001860600191003	THEO-DUR	35.65	13491.42
001860600211	001860600211001	ALBUTEROL	6.86	13491.42
	001860600211002	ALBUTEROL	6.86	13491.42
	001860600211003	ALBUTEROL	6.86	13491.42
001860600228	001860600228001	AEROBID	56.80	13491.42
	001860600228002	AEROBID	56.80	13491.42
	001860600228003	AEROBID	56.80	13491.42
002360270274	002360270274001	ALBUTEROL	14.60	9769.91
002360270298	002360270298001	THEO-24	14.30	9769.91
	002360270298002	THEO-24	14.30	9769.91
002360270318	002360270318001	PROVENTIL HFA	32.99	9769.91
	002360270318002	PROVENTIL HFA	32.99	9769.91
	002360270318003	PROVENTIL HFA	32.99	9769.91
	002360270318004	PROVENTIL HFA	32.99	9769.91
002360270349	002360270349001	ALBUTEROL SULFATE	6.60	9769.91
	002360270349002	ALBUTEROL SULFATE	6.60	9769.91
002360270356	002360270356001	VANCERIL	31.03	9769.91
	002360270356002	VANCERIL	31.03	9769.91
	002360270356003	VANCERIL	31.03	9769.91
	002360270356004	VANCERIL	31.03	9769.91

HC-016I   15:34

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-016A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
002360270387	002360270387001	THEO-24	14.30	9769.91
002360270445	002360270445001	PROVENTIL HFA	32.99	9769.91
002550290309	002550290309001	VENTOLIN	23.97	14080.51
	002550290309002	VENTOLIN	23.97	14080.51
002550290316	002550290316001	AZMACORT	45.46	14080.51
002550290330	002550290330001	PREDNISONE	12.49	14080.51
003050120408	003050120408001	DIFIL-G	20.23	4941.63
	003050120408002	DIFIL-G	20.23	4941.63
003050120559	003050120559001	ZITHROMAX	37.31	4941.63
003050120580	003050120580001	DELTASONE	0.29	4941.63
003050120597	003050120597001	ALBUTEROL	52.50	4941.63
	003050120597002	ALBUTEROL	52.50	4941.63
	003050120597003	ALBUTEROL	26.25	4941.63
	003050120597004	ALBUTEROL	52.50	4941.63
003050120600	003050120600001	BIAXIN	79.87	4941.63
003050120617	003050120617001	AZMACORT	55.69	4941.63
003320230183	003320230183001	DYPHYLLIN-GG200-200	9.48	3758.32
003540170255	003540170255001	AZMACORT	87.33	6893.59
003540170522	003540170522001	AZMACORT	100.24	6893.59
	003540170522002	AZMACORT	81.58	6893.59
	003540170522003	AZMACORT	100.24	6893.59
	003540170522004	AZMACORT	100.24	6893.59
	003540170522005	AZMACORT	100.24	6893.59
	003540170522006	AZMACORT	81.58	6893.59
003540170604	003540170604001	AZMACORT	104.12	6893.59
003540170611	003540170611001	SEREVENT	64.78	6893.59
003540170628	003540170628001	ALBUTEROL	28.11	6893.59
	003540170628002	ALBUTEROL	28.11	6893.59
	003540170628003	ALBUTEROL	28.11	6893.59
003620310127	003620310127001	AMOXICILLIN	3.93	4140.07
	003620310127002	AMOXICILLIN	3.93	4140.07

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-016A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
003620310172	003620310172001	CLARITIN	58.75	4140.07
003620310223	003620310223001	VANCENASE AQ	60.49	4140.07
	003620310223002	VANCENASE AQ	60.49	4140.07
003660480156	003660480156001	ALBUTEROL	16.98	1097.88
003660480170	003660480170001	PREDNISONE	7.08	1097.88
003660480187	003660480187001	AZMACORT INHALER	55.69	1097.88
003660480194	003660480194001	ALBUTEROL INHALATION	23.31	1097.88
003660480207	003660480207001	FLOVENT	150.60	1097.88
003660480214	003660480214001	VANCERIL INHALER	63.59	1097.88
003660480221	003660480221001	INTAL NEBULIZER SOL	46.07	1097.88
003770240551	003770240551001	ALBUTEROL	20.69	5215.67
003770240568	003770240568001	AZMACORT	43.69	5215.67
003770240664	003770240664001	PROVENTIL	28.49	5215.67
003770240671	003770240671001	AZMACORT	53.49	5215.67
004060270671	004060270671001	HABITROL 21MG PATCH	56.82	2303.92
	004060270671002	HABITROL 21MG PATCH	56.82	2303.92
004060270688	004060270688001	PROMETHAZINE/CODEINE	13.49	2303.92
004060270695	004060270695001	BIAXIN	40.29	2303.92
004060270708	004060270708001	PREDNISONE	6.98	2303.92
004060340188	004060340188001	PREDNISONE	20.96	1200.73
004060340195	004060340195001	AEROBID	56.80	1200.73
004060340208	004060340208001	PROVENTIL INHALER	26.50	1200.73
004170230343	004170230343001	HISTINEX DM	9.28	10636.31
	004170230343002	HISTINEX DM	9.37	10636.31
004170230367	004170230367001	BENZTROPINE	4.92	10636.31
	004170230367002	BENZTROPINE	4.92	10636.31
004370110077	004370110077001	ALBUTEROL	18.99	5603.40

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-016A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
004500450025	004500450025001	INHALER	31.02	7954.54
004500450032	004500450032001	INHALER	31.02	7954.54
	004500450032002	INHALER	31.02	7954.54
	004500450032003	INHALER	31.02	7954.54
004500450063	004500450063001	INHALER	31.02	7954.54
004670210094	004670210094001	ALBUTEROL	7.19	12912.96
	004670210094002	ALBUTEROL	7.19	12912.96
	004670210094003	ALBUTEROL	7.19	12912.96
	004670210094004	ALBUTEROL	7.19	12912.96
004670210107	004670210107001	CROMOLYN	36.35	12912.96
	004670210107002	CROMOLYN	36.35	12912.96
004670210114	004670210114001	ALBUTEROL SULFATE	17.59	12912.96
	004670210114002	ALBUTEROL SULFATE	17.59	12912.96
004670210121	004670210121001	ALBUTEROL	32.60	12912.96
004840520349	004840520349001	BRONCHO SALINE	9.45	1734.86
	004840520349002	BRONCHO SALINE	9.45	1734.86
	004840520349003	BRONCHO SALINE	9.45	1734.86
	004840520349004	BRONCHO SALINE	9.45	1734.86
	004840520349005	BRONCHO SALINE	9.45	1734.86
005690210145	005690210145001	AZMACORT	57.72	3665.85
	005690210145002	AZMACORT	57.72	3665.85
	005690210145003	AZMACORT	57.72	3665.85
	005690210145004	AZMACORT	57.72	3665.85
005720390121	005720390121001	DIFIL-G	20.23	2311.34
006760120187	006760120187001	ALBUTEROL	19.69	5122.63
006760120194	006760120194001	-9	6.25	5122.63
	006760120194002	-9	6.25	5122.63
006960390456	006960390456001	CROLOM	45.49	1580.88
	006960390456002	CROLOM	45.49	1580.88
006960390576	006960390576001	ALBUTEROL	26.49	1580.88
	006960390576002	ALBUTEROL	26.49	1580.88
	006960390576003	ALBUTEROL	26.49	1580.88
	006960390576004	ALBUTEROL	26.49	1580.88
	006960390576005	ALBUTEROL	26.49	1580.88
	006960390576006	ALBUTEROL	26.49	1580.88
	006960390576007	ALBUTEROL	26.49	1580.88

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-016A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
006960390583	006960390583001	CROLOM	45.49	1580.88
	006960390583002	CROLOM	45.49	1580.88
	006960390583003	CROLOM	45.49	1580.88
	006960390583004	CROLOM	45.49	1580.88
	006960390583005	CROLOM	45.49	1580.88
006960390658	006960390658001	ALBUTEROL	21.70	1580.88
006960390665	006960390665001	CROLOM	45.49	1580.88
	006960390665002	CROLOM	45.49	1580.88
006960390689	006960390689001	VENTOLIN	25.18	1580.88
	006960390689002	VENTOLIN	25.04	1580.88
006960460963	006960460963001	CROLOM	45.49	3453.25
	006960460963002	CROLOM	45.49	3453.25
	006960460963003	CROLOM	45.49	3453.25
	006960460963004	CROLOM	45.49	3453.25
006960460970	006960460970001	ALBUTEROL	26.49	3453.25
	006960460970002	ALBUTEROL	26.49	3453.25
	006960460970003	ALBUTEROL	26.49	3453.25
	006960460970004	ALBUTEROL	26.49	3453.25
006960461086	006960461086001	CROLOM	45.49	3453.25
	006960461086002	CROLOM	45.49	3453.25
006960461093	006960461093001	ALBUTEROL	26.49	3453.25
	006960461093002	ALBUTEROL	26.49	3453.25
007030280899	007030280899001	AZMACORT	40.23	6223.48
007030280919	007030280919001	TILADE	26.26	6223.48
007030280926	007030280926001	SEREVENT INHALER	55.48	6223.48
007030281176	007030281176001	PREDNISONE	12.27	6223.48
	007030281176002	PREDNISONE	12.27	6223.48
007030281227	007030281227001	ALBUTEROL	16.73	6223.48
007210140338	007210140338001	SEREVENT	52.93	5215.00
007210140369	007210140369001	PROVENTIL	36.95	5215.00
007210140763	007210140763001	SEREVENT	52.93	5215.00
	007210140763002	SEREVENT	52.93	5215.00
	007210140763003	SEREVENT	52.93	5215.00

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-016A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
007210140770	007210140770001	VANCERIL INHALER	63.59	5215.00
007330320040	007330320040001	PROVENTIL	50.60	6009.06
	007330320040002	PROVENTIL	50.60	6009.06
	007330320040003	PROVENTIL	50.60	6009.06
	007330320040004	PROVENTIL	50.60	6009.06
007330320057	007330320057001	PROVENTIL	50.60	6009.06
	007330320057002	PROVENTIL	50.60	6009.06
	007330320057003	PROVENTIL	50.60	6009.06
007330320064	007330320064001	PROVENTIL	50.60	6009.06
007640120815	007640120815001	METHYLPREDNISOLONE	9.08	6906.32
007640120822	007640120822001	AZMACORT	40.54	6906.32
007870290373	007870290373001	NUTRACORT	21.10	10376.27
	007870290373002	NUTRACORT	19.50	10376.27
	007870290373003	NUTRACORT	21.10	10376.27
	007870290373004	NUTRACORT	21.10	10376.27
007870290380	007870290380001	ALBUTEROL 90MCG	21.41	10376.27
	007870290380002	ALBUTEROL 90MCG	21.41	10376.27
	007870290380003	ALBUTEROL 90MCG	21.41	10376.27
	007870290380004	ALBUTEROL 90MCG	21.41	10376.27
007950160636	007950160636001	PROVENTIL	26.65	4655.28
007950160814	007950160814001	ALBUTEROL	18.29	4655.28
007950160821	007950160821001	SLO-BID	13.52	4655.28
	007950160821002	SLO-BID	13.52	4655.28
	007950160821003	SLO-BID	81.15	4655.28
	007950160821004	SLO-BID	81.15	4655.28
	007950160821005	SLO-BID	13.52	4655.28
	007950160821006	SLO-BID	81.15	4655.28
007950160965	007950160965001	PROVENTIL	26.48	4655.28
007950160996	007950160996001	UNI-DUR ER	37.77	4655.28
	007950160996002	UNI-DUR ER	37.77	4655.28
008510200220	008510200220001	PROPOXYPHENE	62.50	2741.96
008510200244	008510200244001	PREDNISONE	6.69	2741.96
008510200268	008510200268001	INHALER	31.02	2741.96

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-016A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
008540420298	008540420298001	ALBUTEROL	21.41	23783.33
008580330096	008580330096001	ALBUTEROL	87.74	4805.32
	008580330096002	ALBUTEROL	87.74	4805.32
008850120241	008850120241001	HUMIBID L.A.	28.85	3756.00
	008850120241002	HUMIBID L.A.	28.85	3756.00
008850120272	008850120272001	ALBUTEROL	262.50	3756.00
	008850120272002	ALBUTEROL	262.50	3756.00
	008850120272003	ALBUTEROL	262.50	3756.00
008850120316	008850120316001	VOLMAX	10.22	3756.00
	008850120316002	VOLMAX	10.22	3756.00
008850120330	008850120330001	LASIX	8.49	3756.00
008850120392	008850120392001	AZMACORT	57.72	3756.00
008850120405	008850120405001	HUMIBID L.A.	28.85	3756.00
	008850120405002	HUMIBID L.A.	28.85	3756.00
	008850120405003	HUMIBID L.A.	28.85	3756.00
	008850120405004	HUMIBID L.A.	28.85	3756.00
008850120412	008850120412001	DELTASONE	4.99	3756.00
008850120429	008850120429001	IPRATROPIUM	5.00	3756.00
	008850120429002	IPRATROPIUM	5.00	3756.00
	008850120429003	IPRATROPIUM	264.00	3756.00
	008850120429004	IPRATROPIUM	5.00	3756.00
	008850120429005	IPRATROPIUM	264.00	3756.00
	008850120429006	IPRATROPIUM	5.00	3756.00
008850120443	008850120443001	TC3	5.00	3756.00
	008850120443002	TC3	5.00	3756.00
	008850120443003	TC3	5.00	3756.00
	008850120443004	TC3	5.00	3756.00
	008850120443005	TC3	5.00	3756.00
	008850120443006	TC3	5.00	3756.00
008850120450	008850120450001	CO-GESIC	8.79	3756.00
	008850120450002	CO-GESIC	8.99	3756.00
	008850120450003	CO-GESIC	8.99	3756.00
	008850120450004	CO-GESIC	8.99	3756.00
	008850120450005	CO-GESIC	8.99	3756.00
	008850120450006	CO-GESIC	8.79	3756.00
008850120467	008850120467001	NEBULIZER	77.38	3756.00
	008850120467002	NEBULIZER	77.38	3756.00

                          Sample SAS Job for Example B
                          sample print of work.aspmeds
             PMED (HC-016A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
008850120467	008850120467003	NEBULIZER	77.38	3756.00
	008850120467004	NEBULIZER	77.38	3756.00
	008850120467005	NEBULIZER	77.38	3756.00
	008850120467006	NEBULIZER	77.38	3756.00
008850120474	008850120474001	VOLMAX	41.44	3756.00
	008850120474002	VOLMAX	62.15	3756.00
	008850120474003	VOLMAX	62.15	3756.00
	008850120474004	VOLMAX	62.15	3756.00
008850120481	008850120481001	LANOXIN	13.52	3756.00
	008850120481002	LANOXIN	13.52	3756.00
	008850120481003	LANOXIN	13.52	3756.00
008850120498	008850120498001	LASIX	8.49	3756.00
	008850120498002	LASIX	8.49	3756.00
008850120525	008850120525001	AZMACORT	57.72	3756.00
	008850120525002	AZMACORT	57.72	3756.00
	008850120525003	AZMACORT	57.72	3756.00
	008850120525004	AZMACORT	57.72	3756.00
008900290248	008900290248001	ATROVENT INHALER	32.29	4277.52
	008900290248002	ATROVENT INHALER	32.29	4277.52
008900290255	008900290255001	VENTOLIN	33.75	4277.52
	008900290255002	VENTOLIN	33.75	4277.52
008900290313	008900290313001	ATROVENT INHALER	32.29	4277.52
	008900290313002	ATROVENT INHALER	32.29	4277.52
	008900290313003	ATROVENT INHALER	32.29	4277.52
	008900290313004	ATROVENT INHALER	32.29	4277.52
	008900290313005	ATROVENT INHALER	32.29	4277.52
008900290344	008900290344001	ALBUTEROL	24.91	4277.52
	008900290344002	ALBUTEROL	24.91	4277.52
	008900290344003	ALBUTEROL	24.91	4277.52
	008900290344004	ALBUTEROL	24.91	4277.52
	008900290344005	ALBUTEROL	24.91	4277.52
008900290382	008900290382001	ALBUTEROL	15.71	4277.52
008900290399	008900290399001	IPRATROPIUM BROMIDE	67.50	4277.52
008950100347	008950100347001	THEO-DUR	12.63	9858.80
	008950100347002	THEO-DUR	12.63	9858.80

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

Analysis Variable : RXXP97X SUM OF PAYMENTS RXSF97X-RXOU97X(IMPUTED)

```
        N            Sum
     -------------------
     8642      299142.55
     -------------------
```

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

Weighted

Analysis Variable : RXXP97X SUM OF PAYMENTS RXSF97X-RXOU97X(IMPUTED)

```
        N            Sum
   ------------------
   8642     2094307091
   ------------------
```

```
1                                         The SAS System                          15:34 Thursday, June 7,
2001

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NOTE: SAS (r) Proprietary Software Release 6.12  TS025
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1
2          OPTIONS LS=132 PS=59;
3
4          TITLE1 "HC-016I";
5          TITLE2 'Sample SAS Job for Example C';
6
7          LIBNAME IN 'D:\';
NOTE: Libref IN was successfully assigned as follows:
      Engine:        V603
      Physical Name: D:\
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: The PROCEDURE FORMAT used 0.77 seconds.


23
24         *------------------------------------------------------------------------------------
25         * Get conditions records coded as asthma.
26         *-----------------------------------------------------------------------------------;
27         DATA ASCONDS;
28           SET IN.H18 (KEEP=CONDIDX CCCODEX);
29           IF CCCODEX="128";
30         RUN;

NOTE: The data set WORK.ASCONDS has 1763 observations and 2 variables.
NOTE: The DATA statement used 44.04 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: The data set WORK.ASCONDS has 1763 observations and 2 variables.
NOTE: The PROCEDURE SORT used 0.66 seconds.
```

```
36
37          proc print data=asconds (obs=50);
38             title3 "sample print of work.asconds - sorted by condidx";
39             title4 "COND (HC-018) records where cccodex=128";
40          run;
```

NOTE: The PROCEDURE PRINT printed page 1.
NOTE: The PROCEDURE PRINT used 0.44 seconds.

```
41
42          PROC SORT DATA=IN.H16IF1 OUT=CLNK; BY CONDIDX; RUN;
```

NOTE: The data set WORK.CLNK has 310651 observations and 5 variables.
NOTE: The PROCEDURE SORT used 46.29 seconds.

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

NOTE: The data set WORK.ASCLNKS has 6789 observations and 3 variables.
NOTE: The DATA statement used 26.85 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: The PROCEDURE PRINT printed pages 2-3.
NOTE: The PROCEDURE PRINT used 0.7 seconds.

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

NOTE: The data set WORK.ASCLNKS has 6789 observations and 3 variables.
NOTE: The PROCEDURE SORT used 1.59 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: The PROCEDURE PRINT printed page 4.
NOTE: The PROCEDURE PRINT used 0.0 seconds.


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

NOTE: The data set WORK.ASCLNKS has 6751 observations and 2 variables.
NOTE: The DATA statement used 1.27 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: The PROCEDURE PRINT printed page 5.
NOTE: The PROCEDURE PRINT used 0.05 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.HC16GF1 (KEEP=EVNTIDX WTDPER97 SEETLKPV OBXP97X);
82            IF WTDPER97 > 0 & SEETLKPV NE 2;
83          RUN;
```

NOTE: The data set WORK.MVIS has 142119 observations and 4 variables.
NOTE: The DATA statement used 49.53 seconds.


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

NOTE: The data set WORK.MVIS has 142119 observations and 4 variables.
NOTE: The PROCEDURE SORT used 20.64 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: The data set WORK.ASMVIS has 2245 observations and 5 variables.

NOTE: The DATA statement used 6.15 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-016G) events";
101        run;
```

NOTE: The PROCEDURE PRINT printed page 6.
NOTE: The PROCEDURE PRINT used 0.27 seconds.


```
102
103        PROC MEANS DATA=ASMVIS N SUM;
104          VAR OBXP97X;
105          TITLE3 "Total medical visit expenditures (excluding telephone) associated with asthma";
106        RUN;
```

NOTE: The PROCEDURE MEANS printed page 7.
NOTE: The PROCEDURE MEANS used 0.28 seconds.


```
107
108        PROC MEANS DATA=ASMVIS SUM;
109          VAR OBXP97X;
110          WEIGHT WTDPER97;
111          TITLE3 "Total medical visit expenditures (excluding telephone) associated with asthma";
112          TITLE5 "Weighted";
113        RUN;
```

NOTE: The PROCEDURE MEANS printed page 8.
NOTE: The PROCEDURE MEANS used 0.0 seconds.


```
114
115
116
```

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

Sample SAS Job for Example C
sample print of work.asconds - sorted by condidx
COND (HC-018) records where cccodex=128

OBS	CONDIDX	CCCODEX
1	000040320014	128
2	000050480022	128
3	000050480038	128
4	000200350110	128
5	000650110054	128
6	000670240039	128
7	000850580014	128
8	000980120017	128
9	001170160082	128
10	001660130011	128
11	001660370019	128
12	001660440018	128
13	001830490013	128
14	001860600013	128
15	001900110024	128
16	002360270026	128
17	002400120025	128
18	002550290027	128
19	003050120030	128
20	003210280044	128
21	003210280135	128
22	003320230104	128
23	003370680016	128
24	003430100019	128
25	003470170019	128
26	003540170016	128
27	003620170023	128
28	003620310015	128
29	003660480029	128
30	003770240045	128
31	004060270035	128
32	004060340103	128
33	004160280015	128
34	004170230124	128
35	004370110021	128
36	004500450016	128
37	004630460039	128
38	004670210023	128
39	004840520061	128
40	005030330030	128
41	005060320036	128
42	005070320015	128
43	005260160028	128
44	005300270020	128
45	005670410030	128
46	005690210026	128
47	005710290049	128
48	005720150043	128
49	005720150093	128
50	005720390063	128

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

CONDIDX	EVNTIDX	EVENTYPE
000050480022	000050480059	1 MVIS
	000050480066	1 MVIS
	000050480073	8 PMED
000050480038	000050480080	8 PMED
	000050480097	8 PMED
000200350110	000200350300	1 MVIS
	000200350317	1 MVIS
	000200350444	8 PMED
	000200350475	8 PMED
	000200350502	8 PMED
	000200350519	8 PMED
000650110054	000650110735	8 PMED
	000650110766	1 MVIS
	000650110855	4 STAZ
	000650110906	8 PMED
000670240039	000670240239	1 MVIS
	000670240246	1 MVIS
	000670240253	8 PMED
	000670240260	8 PMED
	000670240277	8 PMED
	000670240284	8 PMED
000980120017	000980120070	8 PMED
	000980120094	1 MVIS
	000980120107	8 PMED
	000980120114	8 PMED
001660440018	001660440028	1 MVIS
	001660440100	8 PMED
001860600013	001860600064	1 MVIS
	001860600071	8 PMED
	001860600095	8 PMED
	001860600108	8 PMED
	001860600122	1 MVIS
	001860600146	8 PMED
	001860600160	8 PMED
	001860600191	8 PMED
	001860600211	8 PMED
	001860600228	8 PMED
002360270026	002360270229	1 MVIS
	002360270236	1 MVIS
	002360270243	1 MVIS
	002360270250	1 MVIS

HC-016I   15:34

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

CONDIDX	EVNTIDX	EVENTYPE
002360270026	002360270274	8 PMED
	002360270298	8 PMED
	002360270318	8 PMED
	002360270349	8 PMED
	002360270356	8 PMED
	002360270387	8 PMED
	002360270445	8 PMED
002550290027	002550290309	8 PMED
	002550290316	8 PMED
	002550290323	1 MVIS
	002550290330	8 PMED
003050120030	003050120408	8 PMED
	003050120460	1 MVIS
	003050120477	1 MVIS
	003050120559	8 PMED
	003050120580	8 PMED
	003050120597	8 PMED
	003050120600	8 PMED
	003050120617	8 PMED
003320230104	003320230183	8 PMED
003540170016	003540170255	8 PMED
	003540170522	8 PMED
	003540170604	8 PMED
	003540170611	8 PMED
	003540170628	8 PMED
003620310015	003620310090	1 MVIS
	003620310127	8 PMED
	003620310141	1 MVIS
	003620310172	8 PMED
	003620310216	1 MVIS
	003620310223	8 PMED
003660480029	003660480132	1 MVIS
	003660480149	1 MVIS
	003660480156	8 PMED

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

OBS	CONDIDX	EVNTIDX	EVENTYPE
1	000050480022	000050480059	1 MVIS
2	000050480022	000050480066	1 MVIS
3	000050480022	000050480073	8 PMED
4	000050480038	000050480080	8 PMED
5	000050480038	000050480097	8 PMED
6	000200350110	000200350300	1 MVIS
7	000200350110	000200350317	1 MVIS
8	000200350110	000200350444	8 PMED
9	000200350110	000200350475	8 PMED
10	000200350110	000200350502	8 PMED
11	000200350110	000200350519	8 PMED
12	000650110054	000650110735	8 PMED
13	000650110054	000650110766	1 MVIS
14	000650110054	000650110855	4 STAZ
15	000650110054	000650110906	8 PMED
16	000670240039	000670240239	1 MVIS
17	000670240039	000670240246	1 MVIS
18	000670240039	000670240253	8 PMED
19	000670240039	000670240260	8 PMED
20	000670240039	000670240277	8 PMED
21	000670240039	000670240284	8 PMED
22	000980120017	000980120070	8 PMED
23	000980120017	000980120094	1 MVIS
24	000980120017	000980120107	8 PMED
25	000980120017	000980120114	8 PMED
26	001660440018	001660440028	1 MVIS
27	001660440018	001660440100	8 PMED
28	001860600013	001860600064	1 MVIS
29	001860600013	001860600071	8 PMED
30	001860600013	001860600095	8 PMED
31	001860600013	001860600108	8 PMED
32	001860600013	001860600122	1 MVIS
33	001860600013	001860600146	8 PMED
34	001860600013	001860600160	8 PMED
35	001860600013	001860600191	8 PMED
36	001860600013	001860600211	8 PMED
37	001860600013	001860600228	8 PMED
38	002360270026	002360270229	1 MVIS
39	002360270026	002360270236	1 MVIS
40	002360270026	002360270243	1 MVIS
41	002360270026	002360270250	1 MVIS
42	002360270026	002360270274	8 PMED
43	002360270026	002360270298	8 PMED
44	002360270026	002360270318	8 PMED
45	002360270026	002360270349	8 PMED
46	002360270026	002360270356	8 PMED
47	002360270026	002360270387	8 PMED
48	002360270026	002360270445	8 PMED
49	002550290027	002550290309	8 PMED
50	002550290027	002550290316	8 PMED

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

```
OBS      EVNTIDX        EVENTYPE

  1    000050480059    1 MVIS
  2    000050480066    1 MVIS
  3    000050480073    8 PMED
  4    000050480080    8 PMED
  5    000050480097    8 PMED
  6    000200350300    1 MVIS
  7    000200350317    1 MVIS
  8    000200350444    8 PMED
  9    000200350475    8 PMED
 10    000200350502    8 PMED
 11    000200350519    8 PMED
 12    000650110735    8 PMED
 13    000650110766    1 MVIS
 14    000650110855    4 STAZ
 15    000650110906    8 PMED
 16    000670240239    1 MVIS
 17    000670240246    1 MVIS
 18    000670240253    8 PMED
 19    000670240260    8 PMED
 20    000670240277    8 PMED
 21    000670240284    8 PMED
 22    000980120070    8 PMED
 23    000980120094    1 MVIS
 24    000980120107    8 PMED
 25    000980120114    8 PMED
 26    001660440028    1 MVIS
 27    001660440100    8 PMED
 28    001860600064    1 MVIS
 29    001860600071    8 PMED
 30    001860600095    8 PMED
 31    001860600108    8 PMED
 32    001860600122    1 MVIS
 33    001860600146    8 PMED
 34    001860600160    8 PMED
 35    001860600191    8 PMED
 36    001860600211    8 PMED
 37    001860600228    8 PMED
 38    002360270229    1 MVIS
 39    002360270236    1 MVIS
 40    002360270243    1 MVIS
 41    002360270250    1 MVIS
 42    002360270274    8 PMED
 43    002360270298    8 PMED
 44    002360270318    8 PMED
 45    002360270349    8 PMED
 46    002360270356    8 PMED
 47    002360270387    8 PMED
 48    002360270445    8 PMED
 49    002550290309    8 PMED
 50    002550290316    8 PMED
```

Sample SAS Job for Example C
sample print of work.asmvis
unique evntidxs from work.asclnks that are non-telephone MVIS (HC-016G) events

OBS	EVNTIDX	EVENTYPE	SEETLKPV	OBXP97X	WTDPER97
1	000050480059	1 MVIS	1	34.50	5750.52
2	000050480066	1 MVIS	1	21.56	5750.52
3	000200350300	1 MVIS	1	33.00	4878.72
4	000200350317	1 MVIS	1	49.11	4878.72
5	000650110766	1 MVIS	1	51.00	9499.40
6	000670240239	1 MVIS	1	30.00	3696.38
7	000670240246	1 MVIS	1	30.00	3696.38
8	000980120094	1 MVIS	1	40.00	8256.38
9	001660440028	1 MVIS	1	19.21	10815.33
10	001860600064	1 MVIS	1	49.00	13491.42
11	001860600122	1 MVIS	1	259.00	13491.42
12	002360270229	1 MVIS	1	85.00	9769.91
13	002360270236	1 MVIS	1	16.00	9769.91
14	002360270243	1 MVIS	1	98.10	9769.91
15	002360270250	1 MVIS	1	71.77	9769.91
16	002550290323	1 MVIS	1	81.60	14080.51
17	003050120460	1 MVIS	1	50.40	4941.63
18	003050120477	1 MVIS	1	10.00	4941.63
19	003620310090	1 MVIS	1	55.00	4140.07
20	003620310141	1 MVIS	1	4.58	4140.07
21	003620310216	1 MVIS	1	32.09	4140.07
22	003660480132	1 MVIS	1	154.82	1097.88
23	003660480149	1 MVIS	1	43.58	1097.88
24	004060270664	1 MVIS	1	55.00	2303.92
25	004170230312	1 MVIS	1	34.42	10636.31
26	004500450049	1 MVIS	1	111.60	7954.54
27	004500450056	1 MVIS	1	111.60	7954.54
28	004630460176	1 MVIS	1	15.00	3485.58
29	004630460183	1 MVIS	1	35.00	3485.58
30	004630460190	1 MVIS	1	26.37	3485.58
31	004670210063	1 MVIS	1	33.50	12912.96
32	004670210070	1 MVIS	1	112.50	12912.96
33	004670210087	1 MVIS	1	33.50	12912.96
34	004840520243	1 MVIS	1	65.00	1734.86
35	004840520250	1 MVIS	1	40.00	1734.86
36	004840520274	1 MVIS	1	55.02	1734.86
37	004840520281	1 MVIS	1	21.97	1734.86
38	004840520298	1 MVIS	1	40.00	1734.86
39	004840520301	1 MVIS	1	40.00	1734.86
40	004840520318	1 MVIS	1	40.00	1734.86
41	004840520325	1 MVIS	1	40.00	1734.86
42	006760120156	1 MVIS	1	93.00	5122.63
43	006960390514	1 MVIS	1	27.23	1580.88
44	006960390538	1 MVIS	1	35.00	1580.88
45	007030280762	1 MVIS	1	30.00	6223.48
46	007030281063	1 MVIS	1	33.66	6223.48
47	007030281070	1 MVIS	1	22.00	6223.48
48	007030281183	1 MVIS	1	103.22	6223.48
49	007210140434	1 MVIS	1	10.00	5215.00
50	007210140441	1 MVIS	1	10.00	5215.00

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

Analysis Variable : OBXP97X SUM OF OBSF97X-OBOT97X (IMPUTED)

```
        N           Sum
     ------------------
     2245      142568.95
     ------------------
```

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

Weighted

Analysis Variable : OBXP97X SUM OF OBSF97X-OBOT97X (IMPUTED)

```
                              Sum
                         ------------
                          938863539
                         ------------
```

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```
1
2             OPTIONS LS=132 PS=59;
3
4             TITLE1 "HC-016I";
5             TITLE2 'Sample SAS Job for Example D';
6
7             LIBNAME IN 'D:\';
NOTE: Libref IN was successfully assigned as follows:
      Engine:      V603
      Physical Name: D:\
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: The PROCEDURE FORMAT used 0.27 seconds.
```

```
43
44            *------------------------------------------------------------------------------------
45            * Get other medical records for insulin for persons with positive weights.
46            *------------------------------------------------------------------------------------;
47
48            DATA OMED;
49              SET IN.HC16CF1 (KEEP=EVNTIDX WTDPER97 OMTYPEX);
50              IF WTDPER97 > 0 & OMTYPEX = 2;
51            RUN;
```

NOTE: The data set WORK.OMED has 599 observations and 3 variables.
NOTE: The DATA statement used 1.37 seconds.

```
52
53            proc print data=omed (obs=100);
54              var evntidx OMTYPEX WTDPER97;
55              format OMTYPEX omtype.;
56              title3 "sample print of OMED (HC-016C) records where OMTYPEX=2";
57            run;
```

NOTE: The PROCEDURE PRINT printed pages 1-2.
NOTE: The PROCEDURE PRINT used 0.22 seconds.

```
58
59            *------------------------------------------------------------------------------------
60            * Get PMED IDs linked to the OMED events which were for insulin.
61            *------------------------------------------------------------------------------------;
62
63            PROC SORT DATA=IN.H16IF2 OUT=RXLK; BY EVNTIDX; RUN;
```

NOTE: The data set WORK.RXLK has 60020 observations and 5 variables.
NOTE: The PROCEDURE SORT used 6.04 seconds.

```
64
65            proc print data=rxlk (obs=150);
66              by evntidx;
67              id evntidx;
68              var linkidx eventype;
69              format eventype eventype.;
70              title3 "sample print of Rx+event link file records (HC-10IF2) - sorted by eventidx";
71            run;
```

NOTE: The PROCEDURE PRINT printed pages 3-7.
NOTE: The PROCEDURE PRINT used 0.33 seconds.

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

NOTE: The data set WORK.OMEDRXLK has 1165 observations and 5 variables.
NOTE: The DATA statement used 1.05 seconds.

```
76          proc print data=omedrxlk (obs=120);
77            by evntidx;
78            id evntidx;
79            var linkidx eventype;
80            format eventype eventype.;
81            title3 "sample print of work.omedrxlk - sorted by eventidx";
82            title4 "Rx+event link file records (HC-16IF2) where eventype=6 (omed)";
83          run;

NOTE: The PROCEDURE PRINT printed pages 8-12.
NOTE: The PROCEDURE PRINT used 0.05 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: The data set WORK.PMEDIDS has 575 observations and 3 variables.
NOTE: The DATA statement used 0.93 seconds.


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

NOTE: The PROCEDURE PRINT printed pages 13-14.
NOTE: The PROCEDURE PRINT used 0.0 seconds.


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

NOTE: The data set WORK.PMEDIDS has 575 observations and 3 variables.
NOTE: The PROCEDURE SORT used 0.05 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: The PROCEDURE PRINT printed page 15.
NOTE: The PROCEDURE PRINT used 0.05 seconds.


106
```

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

NOTE: The data set WORK.PMEDIDS has 575 observations and 1 variables.
NOTE: The DATA statement used 0.22 seconds.


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

NOTE: The PROCEDURE PRINT printed page 16.
NOTE: The PROCEDURE PRINT used 0.0 seconds.


117
118
119          *---------------------------------------------------------------------------------------
120          * Get PMED records for OMED event which were for insulin.
121          *--------------------------------------------------------------------------------------;
122          PROC SORT DATA=IN.H16A OUT=PMED; BY LINKIDX; RUN;

NOTE: The data set WORK.PMED has 234532 observations and 54 variables.
NOTE: The PROCEDURE SORT used 1 minute 49.29 seconds.


123
124          DATA OMPMEDS;
125            MERGE PMED (KEEP=LINKIDX RXRECIDX  RXXP97X WTDPER97 RXNAME)
126                  PMEDIDS (IN=A);
127            BY LINKIDX;
128            IF A & WTDPER97>0;
129          RUN;

NOTE: The data set WORK.OMPMEDS has 2154 observations and 5 variables.
NOTE: The DATA statement used 26.53 seconds.


130
131          proc print data=ompmeds (obs=200);
132            by linkidx;
133            id linkidx;
134            var rxrecidx rxname RXXP97X  WTDPER97;
135            title3 "sample print of work.pmeds";
136            title4 "PMED (HC-016A) records for unique linkidxs in work.pmedids";
137          run;

NOTE: The PROCEDURE PRINT printed pages 17-22.
NOTE: The PROCEDURE PRINT used 0.05 seconds.


138
```

```
139          PROC MEANS DATA=OMPMEDS N SUM;
140             VAR RXXP97X;
141             TITLE3 "Total Rx expenditures associated with other medical expenses for insulin";
142          RUN;
```

NOTE: The PROCEDURE MEANS printed page 23.
NOTE: The PROCEDURE MEANS used 0.17 seconds.

```
143
144          PROC MEANS DATA=OMPMEDS N SUM;
145             VAR RXXP97X;
146             WEIGHT WTDPER97;
147             TITLE3 "Total Rx expenditures associated with other medical expenses for insulin";
148             TITLE5 "Weighted";
149          RUN;
```

NOTE: The PROCEDURE MEANS printed page 24.
NOTE: The PROCEDURE MEANS used 0.0 seconds.

```
150
151
```

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

Friday, June 8, 2001   1

Sample SAS Job for Example D
sample print of OMED (HC-016C) records where OMTYPEX=2

OBS	EVNTIDX	OMTYPEX	WTDPER97
1	000060180276	2 INSULIN	2886.87
2	000320280256	2 INSULIN	9715.75
3	000650110886	2 INSULIN	9499.40
4	000650111132	2 INSULIN	9499.40
5	001130170407	2 INSULIN	5775.05
6	001420270418	2 INSULIN	7922.72
7	001420270449	2 INSULIN	7922.72
8	001650120269	2 INSULIN	7062.68
9	001650120536	2 INSULIN	7062.68
10	001990260441	2 INSULIN	6143.05
11	003080260157	2 INSULIN	8317.81
12	003080260188	2 INSULIN	8317.81
13	003280130531	2 INSULIN	6051.64
14	003280130853	2 INSULIN	6051.64
15	003750110183	2 INSULIN	1776.96
16	003910200251	2 INSULIN	5012.96
17	003910200340	2 INSULIN	5012.96
18	004430180473	2 INSULIN	6467.89
19	004430180668	2 INSULIN	6467.89
20	004560270131	2 INSULIN	2994.87
21	004710120119	2 INSULIN	12418.25
22	004710120188	2 INSULIN	12418.25
23	004710120291	2 INSULIN	12418.25
24	004710290099	2 INSULIN	6252.84
25	004710290171	2 INSULIN	6252.84
26	004880240473	2 INSULIN	6885.96
27	004880240579	2 INSULIN	6885.96
28	004980171030	2 INSULIN	11061.77
29	006930160222	2 INSULIN	2705.97
30	006930160417	2 INSULIN	2705.97
31	007080180658	2 INSULIN	8486.02
32	007170110094	2 INSULIN	4239.57
33	007440120775	2 INSULIN	3755.10
34	007900110090	2 INSULIN	13117.47
35	007920190286	2 INSULIN	5860.25
36	008040200136	2 INSULIN	3099.07
37	008310250237	2 INSULIN	7363.37
38	008690140533	2 INSULIN	7049.45
39	008690140622	2 INSULIN	7049.45
40	008850290309	2 INSULIN	5816.85
41	009640240385	2 INSULIN	11260.52
42	009640240614	2 INSULIN	11260.52
43	010030150219	2 INSULIN	3209.30
44	010360120854	2 INSULIN	15029.21
45	010790190792	2 INSULIN	6185.94
46	010790190963	2 INSULIN	6185.94
47	010860180210	2 INSULIN	6115.77
48	010950150157	2 INSULIN	2157.55
49	012070100454	2 INSULIN	3755.07
50	012260100170	2 INSULIN	9896.89
51	012670240156	2 INSULIN	1495.78
52	013290160256	2 INSULIN	7388.94
53	013290160352	2 INSULIN	7388.94

Sample SAS Job for Example D
sample print of OMED (HC-016C) records where OMTYPEX=2

OBS	EVNTIDX	OMTYPEX	WTDPER97
54	013540110348	2 INSULIN	7671.79
55	013540110451	2 INSULIN	7671.79
56	013540110742	2 INSULIN	7671.79
57	013620180718	2 INSULIN	5357.54
58	013680140359	2 INSULIN	2596.00
59	013680140424	2 INSULIN	2596.00
60	013840110521	2 INSULIN	14168.60
61	014330100368	2 INSULIN	6439.33
62	014330100464	2 INSULIN	6439.33
63	015900180808	2 INSULIN	7385.89
64	015900180891	2 INSULIN	7385.89
65	016160131063	2 INSULIN	3241.90
66	016350200373	2 INSULIN	1965.33
67	016350200640	2 INSULIN	1965.33
68	016390330445	2 INSULIN	3112.24
69	016520480077	2 INSULIN	6722.22
70	016860270712	2 INSULIN	7051.02
71	017550200330	2 INSULIN	7507.19
72	017550200385	2 INSULIN	7507.19
73	017770100509	2 INSULIN	5243.27
74	017770100674	2 INSULIN	5243.27
75	018350120155	2 INSULIN	1852.38
76	018650133570	2 INSULIN	2002.43
77	018650133830	2 INSULIN	2002.43
78	018900290189	2 INSULIN	7783.39
79	018900290209	2 INSULIN	7783.39
80	019090260187	2 INSULIN	11676.01
81	019140190294	2 INSULIN	1659.06
82	019580120399	2 INSULIN	4039.58
83	019580120700	2 INSULIN	4039.58
84	020520130250	2 INSULIN	8390.90
85	020520130394	2 INSULIN	8390.90
86	020520130534	2 INSULIN	8390.90
87	020750120221	2 INSULIN	1936.85
88	020750120310	2 INSULIN	1936.85
89	021040110380	2 INSULIN	6060.77
90	021040110602	2 INSULIN	6060.77
91	022720300498	2 INSULIN	4998.57
92	022860230558	2 INSULIN	6461.53
93	022910170168	2 INSULIN	2116.91
94	022910170202	2 INSULIN	2116.91
95	023170240696	2 INSULIN	6136.92
96	023180210319	2 INSULIN	3316.31
97	023420120390	2 INSULIN	3493.68
98	023420120554	2 INSULIN	3493.68
99	024840170639	2 INSULIN	9344.85
100	025450260612	2 INSULIN	16468.14

Sample SAS Job for Example D
sample print of Rx+event link file records (HC-10IF2) - sorted by eventidx

EVNTIDX	LINKIDX	EVENTYPE
000020250058	000020250065	1 MVIS
000020320065	000020320072	1 MVIS
000020320109	000020320116	1 MVIS
000020490161	000020490178	1 MVIS
000030220550	000030220567	4 STAZ
	000030220574	4 STAZ
	000030220581	4 STAZ
	000030220598	4 STAZ
000040550013	000040550020	2 OPAT
000050110120	000050110151	1 MVIS
000050110226	000050110257	1 MVIS
000050170333	000050170460	3 EROM
	000050170477	3 EROM
000050170408	000050170484	1 MVIS
000050170580	000050170768	1 MVIS
000050170597	000050170775	1 MVIS
	000050170782	1 MVIS
000050170648	000050170768	2 OPAT
000050170655	000050170768	2 OPAT
000050170693	000050170799	1 MVIS
000050170720	000050170802	1 MVIS
	000050170819	1 MVIS
000050170737	000050170826	1 MVIS
	000050170833	1 MVIS
000050170744	000050170840	1 MVIS
	000050170857	1 MVIS
000050170751	000050170864	3 EROM
000050171069	000050171103	1 MVIS
	000050171110	1 MVIS
	000050171127	1 MVIS

Sample SAS Job for Example D
sample print of Rx+event link file records (HC-10IF2) - sorted by eventidx

EVNTIDX	LINKIDX	EVENTYPE
000050240100	000050240148	3 EROM
000050240155	000050240179	1 MVIS
000050240162	000050240186	5 DVIS
000050240193	000050240213	1 MVIS
	000050240220	1 MVIS
000050240206	000050240237	1 MVIS
000050310042	000050310059	1 MVIS
000050310066	000050310148	1 MVIS
000050310131	000050310148	2 OPAT
	000050310155	2 OPAT
	000050310162	2 OPAT
000050480011	000050480028	1 MVIS
	000050480035	1 MVIS
000050480059	000050480073	1 MVIS
000050480066	000050480080	1 MVIS
	000050480097	1 MVIS
000060180163	000060180290	4 STAZ
	000060180303	4 STAZ
	000060180310	4 STAZ
	000060180327	4 STAZ
	000060180334	4 STAZ
000060180170	000060180303	4 STAZ
	000060180310	4 STAZ
	000060180327	4 STAZ
	000060180334	4 STAZ
000060180252	000060180269	6 OMED
000060180276	000060180283	6 OMED
000060180341	000060180512	1 MVIS
	000060180529	1 MVIS
	000060180536	1 MVIS
000060180492	000060180505	6 OMED
000070240264	000070240315	1 MVIS
	000070240322	1 MVIS

Sample SAS Job for Example D
sample print of Rx+event link file records (HC-10IF2) - sorted by eventidx

EVNTIDX	LINKIDX	EVENTYPE
000070240264	000070240339	1 MVIS
	000070240346	1 MVIS
	000070240353	1 MVIS
	000070240360	1 MVIS
000100150357	000100150395	5 DVIS
	000100150408	5 DVIS
000100150422	000100150460	1 MVIS
000100150439	000100150477	1 MVIS
	000100150484	1 MVIS
000100150446	000100150477	1 MVIS
	000100150484	1 MVIS
	000100150491	1 MVIS
000100150511	000100150528	6 OMED
000100220213	000100220244	1 MVIS
	000100220251	1 MVIS
	000100220268	1 MVIS
	000100220275	1 MVIS
000100220299	000100220319	1 MVIS
	000100220326	1 MVIS
	000100220333	1 MVIS
	000100220340	1 MVIS
	000100220357	1 MVIS
	000100220364	1 MVIS
000100220302	000100220326	1 MVIS
	000100220340	1 MVIS
	000100220364	1 MVIS
000110110093	000110110120	1 MVIS
000110110137	000110110315	1 MVIS
000110110271	000110110322	1 MVIS
000110110295	000110110322	2 OPAT
000110120129	000110120218	1 MVIS
000110290174	000110290181	5 DVIS
000120190069	000120190083	3 EROM
	000120190090	3 EROM

Sample SAS Job for Example D
sample print of Rx+event link file records (HC-10IF2) - sorted by eventidx

EVNTIDX	LINKIDX	EVENTYPE
000120260045	000120260052	4 STAZ
	000120260069	4 STAZ
	000120260076	4 STAZ
000130190362	000130190468	1 MVIS
000130190475	000130190468	1 MVIS
000130190622	000130190677	1 MVIS
	000130190684	1 MVIS
000150220386	000150220502	3 EROM
	000150220519	3 EROM
000180730041	000180730089	2 OPAT
000200110211	000200110204	1 MVIS
000200280184	000200280191	3 EROM
	000200280204	3 EROM
000200350160	000200350386	5 DVIS
000200350184	000200350393	1 MVIS
000200350204	000200350413	1 MVIS
000200350211	000200350420	3 EROM
000200350242	000200350437	1 MVIS
000200350300	000200350444	1 MVIS
	000200350475	1 MVIS
000200350348	000200350482	1 MVIS
000200350355	000200350499	1 MVIS
000200350406	000200350413	1 MVIS
000200350526	000200350595	1 MVIS
000200350557	000200350608	1 MVIS
000230160229	000230160243	1 MVIS
	000230160250	1 MVIS
000230230072	000230230089	1 MVIS
000240120016	000240120136	1 MVIS

Sample SAS Job for Example D
sample print of Rx+event link file records (HC-10IF2) - sorted by eventidx

```
          EVNTIDX          LINKIDX        EVENTYPE

       000240120016     000240120143     1 MVIS
                        000240120150     1 MVIS
                        000240120167     1 MVIS
                        000240120174     1 MVIS
                        000240120181     1 MVIS

       000240120085     000240120198     1 MVIS

       000240120105     000240120198     1 MVIS

       000240120129     000240120136     4 STAZ
                        000240120143     4 STAZ

       000240130104     000240130111     6 OMED

       000240370015     000240370022     1 MVIS
                        000240370039     1 MVIS

       000310100133     000310100157     3 EROM

       000310100164     000310100171     1 MVIS
                        000310100188     1 MVIS

       000310230120     000310230144     1 MVIS

       000310230151     000310230168     1 MVIS

       000320280105     000320280112     1 MVIS

       000320280256     000320280263     6 OMED

       000320280270     000320280287     6 OMED

       000340100216     000340100261     1 MVIS

       000340100223     000340100278     4 STAZ
                        000340100285     4 STAZ

       000340100230     000340100292     2 OPAT
```

HC-016I   10:13

Sample SAS Job for Example D
sample print of work.omedrxlk - sorted by eventidx
Rx+event link file records (HC-16IF2) where eventype=6 (omed)

EVNTIDX	LINKIDX	EVENTYPE
000060180252	000060180269	6 OMED
000060180276	000060180283	6 OMED
000060180492	000060180505	6 OMED
000100150511	000100150528	6 OMED
000240130104	000240130111	6 OMED
000320280256	000320280263	6 OMED
000320280270	000320280287	6 OMED
000430190326	000430190333	6 OMED
000460110671	000460110688	6 OMED
000650110886	000650110893	6 OMED
000650111132	000650111149	6 OMED
000650111156	000650111163	6 OMED
000920100399	000920100402	6 OMED
001130170407	001130170414	6 OMED
001130170421	001130170438	6 OMED
001280210174	001280210181	6 OMED
001420270418	001420270425	6 OMED
001420270449	001420270456	6 OMED
001420270463	001420270470	6 OMED
001650120269	001650120276	6 OMED
001650120536	001650120543	6 OMED
001650120550	001650120567	6 OMED
001990260441	001990260458	6 OMED
003080260157	003080260164	6 OMED
003080260188	003080260195	6 OMED

Sample SAS Job for Example D
sample print of work.omedrxlk - sorted by eventidx
Rx+event link file records (HC-16IF2) where eventype=6 (omed)

EVNTIDX	LINKIDX	EVENTYPE
003080260208	003080260215	6 OMED
003280130531	003280130548	6 OMED
003280130651	003280130668	6 OMED
003280130853	003280130860	6 OMED
003280130877	003280130884	6 OMED
003300180273	003300180280	6 OMED
003300180297	003300180300	6 OMED
003440190118	003440190125	6 OMED
003440190194	003440190207	6 OMED
003750110183	003750110190	6 OMED
003910200251	003910200268	6 OMED
003910200340	003910200357	6 OMED
003910200364	003910200371	6 OMED
003970160492	003970160505	6 OMED
004430180473	004430180480	6 OMED
004430180668	004430180675	6 OMED
004430180808	004430180815	6 OMED
004560270131	004560270148	6 OMED
004710120119	004710120126	6 OMED
004710120133	004710120140	6 OMED
004710120188	004710120195	6 OMED
004710120291	004710120304	6 OMED
004710120311	004710120328	6 OMED
004710290099	004710290102	6 OMED
004710290119	004710290126	6 OMED

Sample SAS Job for Example D
sample print of work.omedrxlk - sorted by eventidx
Rx+event link file records (HC-16IF2) where eventype=6 (omed)

EVNTIDX	LINKIDX	EVENTYPE
004710290171	004710290188	6 OMED
004710290253	004710290260	6 OMED
004880240473	004880240480	6 OMED
004880240531	004880240548	6 OMED
004880240579	004880240586	6 OMED
004980171030	004980171047	6 OMED
004980171338	004980171345	6 OMED
006030180350	006030180367	6 OMED
006930160222	006930160239	6 OMED
006930160417	006930160424	6 OMED
006930160431	006930160448	6 OMED
007080180658	007080180665	6 OMED
007170110094	007170110107	6 OMED
007170110114	007170110121	6 OMED
007440120775	007440120782	6 OMED
007440120799	007440120802	6 OMED
007900110090	007900110103	6 OMED
007900110110	007900110127	6 OMED
007920190286	007920190293	6 OMED
008040200136	008040200143	6 OMED
008040200150	008040200167	6 OMED
008310250237	008310250244	6 OMED
008690140533	008690140540	6 OMED
008690140622	008690140639	6 OMED
008850290309	008850290316	6 OMED

Sample SAS Job for Example D
sample print of work.omedrxlk - sorted by eventidx
Rx+event link file records (HC-16IF2) where eventype=6 (omed)

EVNTIDX	LINKIDX	EVENTYPE
008850290323	008850290330	6 OMED
009640240614	009640240621	6 OMED
010030150219	010030150226	6 OMED
010230140886	010230140893	6 OMED
010360120854	010360120861	6 OMED
010360120878	010360120885	6 OMED
010790190792	010790190805	6 OMED
010790190963	010790190970	6 OMED
010790190987	010790190994	6 OMED
010860180210	010860180227	6 OMED
010860180525	010860180532	6 OMED
010950150157	010950150164	6 OMED
011510200461	011510200478	6 OMED
012070100454	012070100461	6 OMED
012070100601	012070100618	6 OMED
012200270294	012200270307	6 OMED
012260100156	012260100163	6 OMED
012670240156	012670240163	6 OMED
012670240170	012670240187	6 OMED
013290160256	013290160263	6 OMED
013290160352	013290160369	6 OMED
013540110348	013540110355	6 OMED
013540110451	013540110468	6 OMED
013540110475	013540110482	6 OMED
013540110742	013540110759	6 OMED

Sample SAS Job for Example D
sample print of work.omedrxlk - sorted by eventidx
Rx+event link file records (HC-16IF2) where eventtype=6 (omed)

EVNTIDX	LINKIDX	EVENTYPE
013540110766	013540110773	6 OMED
013620180612	013620180629	6 OMED
013680140359	013680140366	6 OMED
013680140424	013680140431	6 OMED
013680140448	013680140455	6 OMED
013840110521	013840110538	6 OMED
013840110583	013840110590	6 OMED
013940160090	013940160103	6 OMED
014330100368	014330100375	6 OMED
014330100464	014330100471	6 OMED
014330100488	014330100495	6 OMED
015900180808	015900180815	6 OMED
015900180891	015900180904	6 OMED
015900180911	015900180928	6 OMED
016160131063	016160131070	6 OMED
016160131087	016160131094	6 OMED
016350200373	016350200380	6 OMED
016350200640	016350200657	6 OMED
016350200664	016350200671	6 OMED
016390330445	016390330452	6 OMED

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

EVNTIDX	LINKIDX	EVENTYPE
000060180276	000060180283	6 OMED
000320280256	000320280263	6 OMED
000650110886	000650110893	6 OMED
000650111132	000650111149	6 OMED
001130170407	001130170414	6 OMED
001420270418	001420270425	6 OMED
001420270449	001420270456	6 OMED
001650120269	001650120276	6 OMED
001650120536	001650120543	6 OMED
001990260441	001990260458	6 OMED
003080260157	003080260164	6 OMED
003080260188	003080260195	6 OMED
003280130531	003280130548	6 OMED
003280130853	003280130860	6 OMED
003750110183	003750110190	6 OMED
003910200251	003910200268	6 OMED
003910200340	003910200357	6 OMED
004430180473	004430180480	6 OMED
004430180668	004430180675	6 OMED
004560270131	004560270148	6 OMED
004710120119	004710120126	6 OMED
004710120188	004710120195	6 OMED
004710120291	004710120304	6 OMED
004710290099	004710290102	6 OMED
004710290171	004710290188	6 OMED

Friday, June 8, 2001 14

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

```
              EVNTIDX        LINKIDX       EVENTYPE
            004880240473   004880240480    6 OMED
            004880240579   004880240586    6 OMED
            004980171030   004980171047    6 OMED
            006930160222   006930160239    6 OMED
            006930160417   006930160424    6 OMED
            007080180658   007080180665    6 OMED
            007170110094   007170110107    6 OMED
            007440120775   007440120782    6 OMED
            007900110090   007900110103    6 OMED
            007920190286   007920190293    6 OMED
            008040200136   008040200143    6 OMED
            008310250237   008310250244    6 OMED
            008690140533   008690140540    6 OMED
            008690140622   008690140639    6 OMED
            008850290309   008850290316    6 OMED
            009640240614   009640240621    6 OMED
            010030150219   010030150226    6 OMED
            010360120854   010360120861    6 OMED
            010790190792   010790190805    6 OMED
            010790190963   010790190970    6 OMED
            010860180210   010860180227    6 OMED
            010950150157   010950150164    6 OMED
            012070100454   012070100461    6 OMED
            012670240156   012670240163    6 OMED
            013290160256   013290160263    6 OMED
```

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

OBS	EVNTIDX	LINKIDX	EVENTYPE
1	000060180276	000060180283	6 OMED
2	000320280256	000320280263	6 OMED
3	000650110886	000650110893	6 OMED
4	000650111132	000650111149	6 OMED
5	001130170407	001130170414	6 OMED
6	001420270418	001420270425	6 OMED
7	001420270449	001420270456	6 OMED
8	001650120269	001650120276	6 OMED
9	001650120536	001650120543	6 OMED
10	001990260441	001990260458	6 OMED
11	003080260157	003080260164	6 OMED
12	003080260188	003080260195	6 OMED
13	003280130531	003280130548	6 OMED
14	003280130853	003280130860	6 OMED
15	003750110183	003750110190	6 OMED
16	003910200251	003910200268	6 OMED
17	003910200340	003910200357	6 OMED
18	004430180473	004430180480	6 OMED
19	004430180668	004430180675	6 OMED
20	004560270131	004560270148	6 OMED
21	004710120119	004710120126	6 OMED
22	004710120188	004710120195	6 OMED
23	004710120291	004710120304	6 OMED
24	004710290099	004710290102	6 OMED
25	004710290171	004710290188	6 OMED
26	004880240473	004880240480	6 OMED
27	004880240579	004880240586	6 OMED
28	004980171030	004980171047	6 OMED
29	006930160222	006930160239	6 OMED
30	006930160417	006930160424	6 OMED
31	007080180658	007080180665	6 OMED
32	007170110094	007170110107	6 OMED
33	007440120775	007440120782	6 OMED
34	007900110090	007900110103	6 OMED
35	007920190286	007920190293	6 OMED
36	008040200136	008040200143	6 OMED
37	008310250237	008310250244	6 OMED
38	008690140533	008690140540	6 OMED
39	008690140622	008690140639	6 OMED
40	008850290309	008850290316	6 OMED
41	009640240614	009640240621	6 OMED
42	010030150219	010030150226	6 OMED
43	010360120854	010360120861	6 OMED
44	010790190792	010790190805	6 OMED
45	010790190963	010790190970	6 OMED
46	010860180210	010860180227	6 OMED
47	010950150157	010950150164	6 OMED
48	012070100454	012070100461	6 OMED
49	012670240156	012670240163	6 OMED
50	013290160256	013290160263	6 OMED

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

```
OBS        LINKIDX

  1      000060180283
  2      000320280263
  3      000650110893
  4      000650111149
  5      001130170414
  6      001420270425
  7      001420270456
  8      001650120276
  9      001650120543
 10      001990260458
 11      003080260164
 12      003080260195
 13      003280130548
 14      003280130860
 15      003750110190
 16      003910200268
 17      003910200357
 18      004430180480
 19      004430180675
 20      004560270148
 21      004710120126
 22      004710120195
 23      004710120304
 24      004710290102
 25      004710290188
 26      004880240480
 27      004880240586
 28      004980171047
 29      006930160239
 30      006930160424
 31      007080180665
 32      007170110107
 33      007440120782
 34      007900110103
 35      007920190293
 36      008040200143
 37      008310250244
 38      008690140540
 39      008690140639
 40      008850290316
 41      009640240621
 42      010030150226
 43      010360120861
 44      010790190805
 45      010790190970
 46      010860180227
 47      010950150164
 48      012070100461
 49      012670240163
 50      013290160263
```

Sample SAS Job for Example D
sample print of work.pmeds
PMED (HC-016A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
000060180283	000060180283001	REGULAR INSULIN	18.03	2886.87
000320280263	000320280263001	L- REG INSULIN	24.94	9715.75
	000320280263002	L- REG INSULIN	24.94	9715.75
	000320280263003	L- REG INSULIN	24.94	9715.75
	000320280263004	L- REG INSULIN	24.94	9715.75
000650110893	000650110893001	HUMULIN N	19.84	9499.40
	000650110893002	HUMULIN N	19.84	9499.40
	000650110893003	HUMULIN N	19.84	9499.40
	000650110893004	HUMULIN N	19.84	9499.40
	000650110893005	HUMULIN N	19.84	9499.40
	000650110893006	HUMULIN N	19.84	9499.40
	000650110893007	HUMULIN N	19.84	9499.40
000650111149	000650111149001	HUMULIN R	19.84	9499.40
	000650111149002	HUMULIN R	19.84	9499.40
	000650111149003	HUMULIN R	19.84	9499.40
001130170414	001130170414001	L- REG INSULIN	24.94	5775.05
001420270425	001420270425001	REGULAR INSULIN	18.03	7922.72
	001420270425002	REGULAR INSULIN	18.03	7922.72
	001420270425003	REGULAR INSULIN	18.03	7922.72
	001420270425004	REGULAR INSULIN	18.03	7922.72
001420270456	001420270456001	REGULAR INSULIN	18.03	7922.72
001650120276	001650120276001	L- REG INSULIN	24.94	7062.68
	001650120276002	L- REG INSULIN	24.94	7062.68
	001650120276003	L- REG INSULIN	24.94	7062.68
	001650120276004	L- REG INSULIN	24.94	7062.68
	001650120276005	L- REG INSULIN	24.94	7062.68
	001650120276006	L- REG INSULIN	24.94	7062.68
001650120543	001650120543001	REGULAR INSULIN	18.03	7062.68
	001650120543002	REGULAR INSULIN	18.03	7062.68
	001650120543003	REGULAR INSULIN	18.03	7062.68
	001650120543004	REGULAR INSULIN	18.03	7062.68
001990260458	001990260458001	L- REG INSULIN	24.94	6143.05
	001990260458002	L- REG INSULIN	24.94	6143.05
	001990260458003	L- REG INSULIN	24.94	6143.05
	001990260458004	L- REG INSULIN	24.94	6143.05
	001990260458005	L- REG INSULIN	24.94	6143.05
	001990260458006	L- REG INSULIN	24.94	6143.05
	001990260458007	L- REG INSULIN	24.94	6143.05
003080260164	003080260164001	REGULAR INSULIN	18.03	8317.81

                            Sample SAS Job for Example D
                              sample print of work.pmeds
                   PMED (HC-016A) records for unique linkidxs in work.pmedids

```
        LINKIDX          RXRECIDX       RXNAME                      RXXP97X    WTDPER97

     003080260164     003080260164002   REGULAR INSULIN              18.03     8317.81
                      003080260164003   REGULAR INSULIN              18.03     8317.81
                      003080260164004   REGULAR INSULIN              18.03     8317.81
                      003080260164005   REGULAR INSULIN              18.03     8317.81
                      003080260164006   REGULAR INSULIN              18.03     8317.81

     003080260195     003080260195001   L- REG INSULIN               24.94     8317.81
                      003080260195002   L- REG INSULIN               24.94     8317.81

     003280130548     003280130548001   L- REG INSULIN               24.94     6051.64
                      003280130548002   L- REG INSULIN               24.94     6051.64
                      003280130548003   L- REG INSULIN               24.94     6051.64
                      003280130548004   L- REG INSULIN               24.94     6051.64
                      003280130548005   L- REG INSULIN               24.94     6051.64
                      003280130548006   L- REG INSULIN               24.94     6051.64
                      003280130548007   L- REG INSULIN               24.94     6051.64
                      003280130548008   L- REG INSULIN               24.94     6051.64
                      003280130548009   L- REG INSULIN               24.94     6051.64
                      003280130548010   L- REG INSULIN               24.94     6051.64
                      003280130548011   L- REG INSULIN               24.94     6051.64
                      003280130548012   L- REG INSULIN               24.94     6051.64
                      003280130548013   L- REG INSULIN               24.94     6051.64
                      003280130548014   L- REG INSULIN               24.94     6051.64
                      003280130548015   L- REG INSULIN               24.94     6051.64
                      003280130548016   L- REG INSULIN               24.94     6051.64

     003280130860     003280130860001   L- REG INSULIN               24.94     6051.64

     003750110190     003750110190001   L- REG INSULIN               24.94     1776.96
                      003750110190002   L- REG INSULIN               24.94     1776.96

     003910200268     003910200268001   L- REG INSULIN               24.94     5012.96
                      003910200268002   L- REG INSULIN               24.94     5012.96
                      003910200268003   L- REG INSULIN               24.94     5012.96
                      003910200268004   L- REG INSULIN               24.94     5012.96

     003910200357     003910200357001   L- REG INSULIN               24.94     5012.96
                      003910200357002   L- REG INSULIN               24.94     5012.96

     004430180480     004430180480001   HUMULIN R                    17.11     6467.89

     004430180675     004430180675001   HUMULIN R                    34.99     6467.89
                      004430180675002   HUMULIN R                    34.99     6467.89
                      004430180675003   HUMULIN R                    35.10     6467.89
                      004430180675004   HUMULIN R                    35.10     6467.89
                      004430180675005   HUMULIN R                    35.10     6467.89
                      004430180675006   HUMULIN R                    35.10     6467.89

     004560270148     004560270148001   L- REG INSULIN               24.94     2994.87
```

                          Sample SAS Job for Example D
                          sample print of work.pmeds
                 PMED (HC-016A) records for unique linkidxs in work.pmedids

          LINKIDX   RXRECIDX   RXNAME   RXXP97X   WTDPER97

        004560270148   004560270148002   L- REG INSULIN   24.94   2994.87
                        004560270148003   L- REG INSULIN   24.94   2994.87
                        004560270148004   L- REG INSULIN   24.94   2994.87

        004710120126   004710120126001   L- REG INSULIN   24.94   12418.25
                        004710120126002   L- REG INSULIN   24.94   12418.25

        004710120195   004710120195001   L- REG INSULIN   24.94   12418.25
                        004710120195002   L- REG INSULIN   24.94   12418.25
                        004710120195003   L- REG INSULIN   24.94   12418.25
                        004710120195004   L- REG INSULIN   24.94   12418.25
                        004710120195005   L- REG INSULIN   24.94   12418.25

        004710120304   004710120304001   L- REG INSULIN   24.94   12418.25
                        004710120304002   L- REG INSULIN   24.94   12418.25
                        004710120304003   L- REG INSULIN   24.94   12418.25

        004710290102   004710290102001   L- REG INSULIN   24.94   6252.84

        004710290188   004710290188001   L- REG INSULIN   24.94   6252.84
                        004710290188002   L- REG INSULIN   24.94   6252.84
                        004710290188003   L- REG INSULIN   24.94   6252.84
                        004710290188004   L- REG INSULIN   24.94   6252.84
                        004710290188005   L- REG INSULIN   24.94   6252.84

        004880240480   004880240480001   L- REG INSULIN   24.94   6885.96
                        004880240480002   L- REG INSULIN   24.94   6885.96
                        004880240480003   L- REG INSULIN   24.94   6885.96
                        004880240480004   L- REG INSULIN   24.94   6885.96

        004880240586   004880240586001   L- REG INSULIN   24.94   6885.96

        004980171047   004980171047001   L- REG INSULIN   24.94   11061.77
                        004980171047002   L- REG INSULIN   24.94   11061.77
                        004980171047003   L- REG INSULIN   24.94   11061.77
                        004980171047004   L- REG INSULIN   24.94   11061.77
                        004980171047005   L- REG INSULIN   24.94   11061.77

        006930160239   006930160239001   REGULAR INSULIN   18.03   2705.97
                        006930160239002   REGULAR INSULIN   18.03   2705.97
                        006930160239003   REGULAR INSULIN   18.03   2705.97
                        006930160239004   REGULAR INSULIN   18.03   2705.97
                        006930160239005   REGULAR INSULIN   18.03   2705.97

        006930160424   006930160424001   HUMULIN 70/30   35.18   2705.97
                        006930160424002   HUMULIN 70/30   35.18   2705.97
                        006930160424003   HUMULIN 70/30   35.18   2705.97

        007080180665   007080180665001   LIL REG U-100   19.71   8486.02

Sample SAS Job for Example D
sample print of work.pmeds
PMED (HC-016A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
007080180665	007080180665002	LIL REG U-100	19.71	8486.02
	007080180665003	LIL REG U-100	19.71	8486.02
	007080180665004	LIL REG U-100	19.71	8486.02
	007080180665005	LIL REG U-100	19.71	8486.02
	007080180665006	LIL REG U-100	19.71	8486.02
	007080180665007	LIL REG U-100	19.71	8486.02
	007080180665008	LIL REG U-100	19.71	8486.02
007170110107	007170110107001	L- REG INSULIN	24.94	4239.57
007440120782	007440120782001	HUMULIN 70/30	79.36	3755.10
007900110103	007900110103001	L- REG INSULIN	24.94	13117.47
	007900110103002	L- REG INSULIN	24.94	13117.47
	007900110103003	L- REG INSULIN	24.94	13117.47
	007900110103004	L- REG INSULIN	24.94	13117.47
007920190293	007920190293001	L- REG INSULIN	24.94	5860.25
	007920190293002	L- REG INSULIN	24.94	5860.25
008040200143	008040200143001	L- REG INSULIN	24.94	3099.07
	008040200143002	L- REG INSULIN	24.94	3099.07
	008040200143003	L- REG INSULIN	24.94	3099.07
008310250244	008310250244001	NOVOLIN R	34.68	7363.37
008690140540	008690140540001	HUMULIN N	19.84	7049.45
008690140639	008690140639001	BD PLASTIPAK	119.04	7049.45
	008690140639002	HUMULIN R	19.84	7049.45
	008690140639003	BD PLASTIPAK	119.04	7049.45
	008690140639004	BD PLASTIPAK	119.04	7049.45
008850290316	008850290316001	INSULIN NOVOLIN 70/30*10ML	56.79	5816.85
	008850290316002	INSULIN NOVOLIN 70/30*10ML	56.79	5816.85
	008850290316003	INSULIN NOVOLIN 70/30*10ML	56.79	5816.85
009640240621	009640240621001	REGULAR INSULIN	18.03	11260.52
	009640240621002	REGULAR INSULIN	18.03	11260.52
	009640240621003	REGULAR INSULIN	18.03	11260.52
	009640240621004	REGULAR INSULIN	18.03	11260.52
	009640240621005	REGULAR INSULIN	18.03	11260.52
	009640240621006	REGULAR INSULIN	18.03	11260.52
	009640240621007	REGULAR INSULIN	18.03	11260.52
	009640240621008	REGULAR INSULIN	18.03	11260.52
	009640240621009	REGULAR INSULIN	18.03	11260.52
010030150226	010030150226001	HUMULIN 70/30	39.68	3209.30
	010030150226002	HUMULIN 70/30	39.68	3209.30

Sample SAS Job for Example D
sample print of work.pmeds
PMED (HC-016A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
010030150226	010030150226003	HUMULIN 70/30	39.68	3209.30
	010030150226004	HUMULIN 70/30	39.68	3209.30
	010030150226005	HUMULIN 70/30	39.68	3209.30
	010030150226006	HUMULIN 70/30	39.68	3209.30
	010030150226007	HUMULIN 70/30	39.68	3209.30
	010030150226008	HUMULIN 70/30	39.68	3209.30
	010030150226009	HUMULIN 70/30	39.68	3209.30
	010030150226010	HUMULIN 70/30	39.68	3209.30
	010030150226011	HUMULIN 70/30	39.68	3209.30
010360120861	010360120861001	L- REG INSULIN	24.94	15029.21
	010360120861002	L- REG INSULIN	24.94	15029.21
	010360120861003	L- REG INSULIN	24.94	15029.21
010790190805	010790190805001	REGULAR INSULIN	18.03	6185.94
010790190970	010790190970001	REGULAR INSULIN	18.03	6185.94
010860180227	010860180227001	L- REG INSULIN	24.94	6115.77
	010860180227002	L- REG INSULIN	24.94	6115.77
010950150164	010950150164001	L- REG INSULIN	24.94	2157.55
012070100461	012070100461001	REGULAR INSULIN	18.03	3755.07
012670240163	012670240163001	L- REG INSULIN	24.94	1495.78
	012670240163002	L- REG INSULIN	24.94	1495.78
	012670240163003	L- REG INSULIN	24.94	1495.78
	012670240163004	L- REG INSULIN	24.94	1495.78
013290160263	013290160263001	REGULAR INSULIN	18.03	7388.94
	013290160263002	REGULAR INSULIN	18.03	7388.94
	013290160263003	REGULAR INSULIN	18.03	7388.94
013290160369	013290160369001	REGULAR INSULIN	18.03	7388.94
013540110355	013540110355001	NOVOLIN 70/30	20.49	7671.79
	013540110355002	NOVOLIN 70/30	18.98	7671.79
	013540110355003	NOVOLIN 70/30	20.49	7671.79
013540110468	013540110468001	NOVOLIN 70/30	20.49	7671.79
	013540110468002	NOVOLIN 70/30	20.49	7671.79
	013540110468003	NOVOLIN 70/30	20.49	7671.79
	013540110468004	NOVOLIN 70/30	20.49	7671.79
	013540110468005	NOVOLIN 70/30	20.49	7671.79
013540110759	013540110759001	NOVOLIN 70/30	18.98	7671.79
	013540110759002	NOVOLIN 70/30	18.98	7671.79
	013540110759003	NOVOLIN 70/30	18.98	7671.79

Sample SAS Job for Example D
sample print of work.pmeds
PMED (HC-016A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP97X	WTDPER97
013680140366	013680140366001	HUMULIN N	42.35	2596.00
013680140431	013680140431001	L- REG INSULIN	24.94	2596.00
	013680140431002	L- REG INSULIN	24.94	2596.00
	013680140431003	L- REG INSULIN	24.94	2596.00
013840110538	013840110538001	REGULAR INSULIN	18.03	14168.60
	013840110538002	REGULAR INSULIN	18.03	14168.60
014330100375	014330100375001	REGULAR INSULIN	18.03	6439.33
	014330100375002	REGULAR INSULIN	18.03	6439.33

ATTACHMENT 2   **A2-89**   **MEPS HC-016I**

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

Analysis Variable : RXXP97X SUM OF PAYMENTS RXSF97X-RXOU97X(IMPUTED)

```
         N           Sum
    -----------------
    2154        61021.41
    -----------------
```

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

Weighted

Analysis Variable : RXXP97X SUM OF PAYMENTS RXSF97X-RXOU97X(IMPUTED)

```
       N             Sum
   ------------------------
   2154       429352761
   ------------------------
```