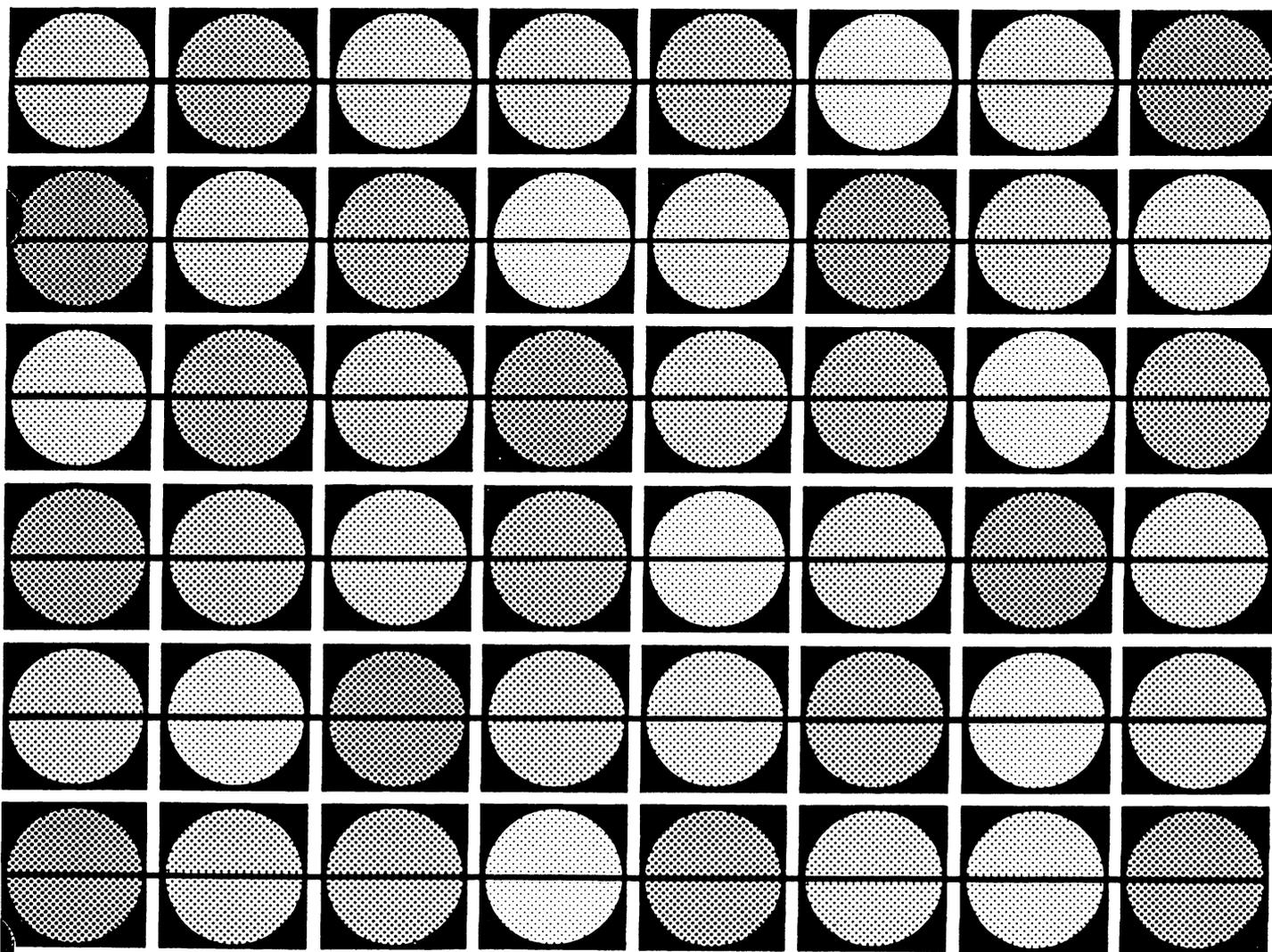


Instruction Manual

Part 11

Computer Edits for Mortality Data, Effective 1990



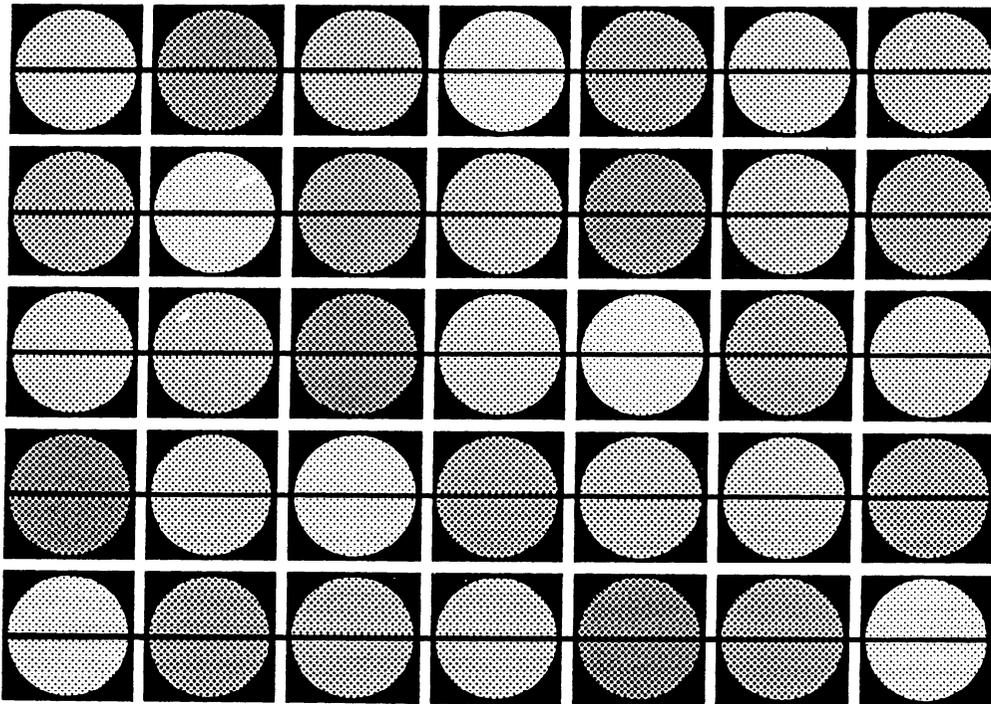
This instruction manual was prepared by the Division of Vital Statistics. Questions regarding this manual and related processing problems should be directed to the Technical Services Branch, Division of Vital Statistics, National Center for Health Statistics, P.O. Box 12214, Research Triangle Park, North Carolina 27709 or Systems and Programming Branch, Division of Vital Statistics, National Center for Health Statistics, 6525 Belcrest Road, Hyattsville, Maryland 20782. Questions concerning interpretation of ICD and mortality data analysis should be referred to Mortality Statistics Branch, Division of Vital Statistics, National Center for Health Statistics, 6525 Belcrest Road, Hyattsville, Maryland 20782.

Instruction Manual

Part 11

Computer Edits for Mortality Data, Effective 1990

Vital Statistics



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control
National Center for Health Statistics

Hyattsville, Maryland
November 1990

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VITAL STATISTICS COMPUTER EDITS

FOR

MORTALITY DATA, EFFECTIVE 1990

I. INTRODUCTION

A. Purpose of This Manual

This manual presents a comprehensive description of the mainframe computer edits used by NCHS in processing mortality data. Edits for two different applications are discussed:

- (1) the total mortality file which consists of death certificates filed for all deaths occurring in the United States annually.
- (2) the Current Mortality Sample file (CMS) which consists of a 10 percent sample of the death certificates cited in (1) above.

The latter file is processed and tabulated on a monthly basis in order to monitor monthly changes in mortality and contains a less detailed codification and/or tabulation of demographic, geographic, and cause-of-death variables than the total file. The total mortality file is used to produce annual data on mortality in the United States. It contains both underlying and multiple cause-of-death variables, whereas the Current Mortality Sample is restricted to codification of the underlying cause of death.

Both kinds of mortality files are generated through a series of processing steps including collection, data entry, and computer processing. Editing of the coded data to assure code validity and consistency among variables is carried out at both the data entry and mainframe computer processing stages. The data entry edits are carried out either manually or interactively on a data entry computer and have the advantage of detecting and correcting major inconsistencies at the point of data entry. The mainframe edits can take advantage of greater computer capability to provide a more comprehensive edit, yet generally require a reject reconciliation cycle for correction of errors. Thus, for the total file, the data entry edits are composed of a small selective subset of the more comprehensive edits applied by the mainframe computer. For the CMS file, the data entry edits are more comprehensive inasmuch as the publication schedule does not permit a reject correction cycle. This manual contains only the mainframe edits. Data entry edits are given in Parts 2d and 5 of this Vital Statistics Instruction Manual series.

The mainframe computer edits are performed at strategic locations (appropriate to their function and application) within the processing flow. They are applied only after the data have passed key entry quality control standards and key entry edit criteria. The edit points for each application are as follows:

For the Current Mortality Sample, the data entry process is initiated by coding all variables into one data record with 100 percent key entry verification and interactive edits. This data record is then edited on the mainframe computer; edit failures are changed through imputation; tables are generated; and the Monthly Vital Statistics Report is prepared and released.

For the total file, the demographic and medical data are entered and processed separately. The demographic data are first key entered and sample verified with interactive key entry editing. The resultant demographic record is then established as a master control record in checks of file completeness and subsequent edit of the geographic, demographic, and control variables. On a separate track, the medical data are key entered and sample verified subsequent to which the mainframe edits are applied to check code validity for each variable. Finally, the demographic and medical data are merged into one composite record at which point demographic/medical consistency edits are applied. In addition, this stage rechecks medical code validity and lists rare causes for review.

It should be noted that at many points during the processing of the total mortality file, computer software will reject records for reasons other than failure to meet the edit criteria in this manual. In particular, the ACME¹ and TRANSAX² automatic coding systems reject records for resolution of issues which cannot be handled automatically.

¹Acronym for Automated Classification of Medical Entities system which checks the condition codes for validity and automatically assigns the underlying cause of death from the condition codes.

²Acronym for Translation of Axis system which translates the condition codes from an entity axis of classification to a record axis of classification for purposes of general multiple cause tabulation and analysis.

For each file, the automated edits are designed to (1) assure code validity for each variable and (2) verify codes or code combinations which are considered either impossible or unlikely occurrences. Additionally, for certain demographic variables, the edits convert codes which are unacceptable for statistical analysis to acceptable codes. In edit failures, the proper code is arrived at in one of two ways. In certain situations, the proper code is imputed or automatically generated without reference to the source certificate. In other situations, the record is rejected and listed for checking of the codes with the information in the source document and/or the State health department. For Current Mortality Sample processing, all fail edits are imputed. For total file processing, the kind of action is dependent on the variable category involved in the edit. Edits for unlikely occurrences (conditional edits) are always checked with the source document. When a data record is edit rejected, the corrected record is processed back through the edits to verify passage of the edit (conditional edits are deactivated in the second pass). The edits and their application are summarized below:

<u>TYPE</u>	<u>APPLICATION</u>			
	<u>Total File</u>		<u>CMS</u>	
	<u>Impute</u>	<u>Reject</u>	<u>Impute</u>	<u>Reject</u>
1. Impossible codes	X	X	X	NA
2. Improbable codes	NA	X	NA	NA
3. Impossible code combinations	NA	X	X	NA
4. Improbable code combinations	NA	X	NA	NA
5. Unacceptable code	X	NA	X	NA

The following sections provide a detailed description of all mainframe computer edits by application. Within application, the demographic file edits are first presented followed by the medical file edits.

B. Revisions from Previous Manual

Changes between this manual and the previous one effective 1989 consist of the following:

1. Incorporation of the following ICD-9 codes in the Infrequent and Rare Cause-of-Death Edits for Underlying and Multiple Cause-of-Death Classification (Table I): 033, 037, 055, 056, 072, 323.5, 771.0, 771.3,)78, and)79.0-79.7.
2. Correction of code 325.7 to 323.5 in Table I.

3. Identifying the nature-of-injury codes with a leading ")" instead of 9 in Table I:)78,)79.0,)79.1,)79.2,)79.3,)79.4,)79.5,)79.6, and)79.7.
4. Deletion of codes 430 and 570 from Table B. Codes 430 and 570 are not valid for multiple cause coding.
5. Changed order of Section II.B., switched Tables E and F, added codes 430, 570, and 7958 to Table F, and added ICD-9 codes to Table E.

II. TOTAL MORTALITY FILE COMPUTER EDITS

A. Demographic Items

Table A provides, for each demographic variable, the edit criteria (if any) which are applied to each category in the variable. Fail edits are identified in terms of whether the results are imputed or rejected for reconciliation. Records having fail edits on the occurrence and residence items are rejected and are listed for reference to the source document to establish the proper code assignment.

B. Medical Items

Valid cause-of-death codes in ICD-9 are categorized in terms of their validity for multiple and underlying cause-of-death classification:

1. Codes Valid to Both Applications

Table B lists the codes valid for both underlying and multiple cause classification. The numbers 8000-999b represent codes in the ICD-9 Supplementary Classification of External Causes of Injury and Poisoning.

2. Codes Valid to Multiple Cause Only

Tables C and D list the ICD-9 codes which are valid for multiple cause coding but not for underlying cause coding. Table C contains the Nature of Injury codes from Chapter XVII, Injury and Poisoning. Note that not all ICD codes in Chapter XVII are included. In particular, a number of codes are used to the 3-digit level only. In this list, the left parenthesis, "(", and right parenthesis, ")," are used in place of the leading "8" and "9," respectively of a code to identify these as Nature of Injury codes (in lieu of External Cause codes which have the same number series in ICD-9). In the final data tape, these codes are converted back to "8's" and "9's" with a special field symbol to differentiate between Chapter XVII codes and E codes.

Table D lists other codes in ICD-9 which are valid to multiple cause coding only. Included in this group are syphilis (congenital and acquired) without clinical manifestations, secondary malignant

neoplasms, certain endocrine, metabolic or digestive disorders, and complications following abortion and ectopic or molar pregnancies. The rules for underlying cause-of-death classification prefer other codes over those listed in this table. (For more detail, see Part 2a of this Vital Statistics Instruction Manual series.)

3. Codes Valid to Underlying Cause Only

Only two codes (430 and 570) in ICD-9 are valid for underlying cause only and not valid for multiple cause coding. For multiple cause coding, these categories were replaced by artificial codes 4300-4302 and 5700-5701, respectively, which are later converted to 430 and 570 for publication purposes. See the following section on artificial codes--noting that the 15 remaining artificial codes were created without the necessity of invalidating the ICD code to which they convert.

4. Artificial Codes

Table E contains a list of special four-digit codes which are used at the condition coding stage only and do not appear in ICD-9. They have been created to facilitate automated identification of causal and linkage relationships between certain conditions when they are processed by the ACME and TRANSAX computer systems. After they have served this purpose, they are converted to their complementary valid ICD-9 categories and will not appear on the final master death tape or in NCHS tabulations of causes of death. Further explanation of the use of these codes may be found in Parts 2b and 2c of this Vital Statistics Instruction Manual series.

5. Codes Not Valid for Underlying and/or Multiple Cause-of-Death Classification

Table F is divided into two lists: codes not valid for underlying cause and those not valid for multiple cause. The codes which are invalid for both underlying and multiple cause are shown in each list.

6. Codes Valid for Dual Classification in ICD-9

ICD-9 provides for the classification of certain diagnostic statements according to two different axes--etiology or underlying disease process and manifestation or complication. Thus, there are two codes for those diagnostic statements subject to dual classification. The etiology or underlying disease process codes are marked with a dagger (/), and the manifestation or complication codes are marked with an asterisk (*) following the code in ICD-9. In mortality classification, the asterisk codes are not used.

C. Composite Medical/Demographic Record

The purpose of this computer edit is to maintain consistency between a reported cause of death (multiple and underlying) and the age and/or sex of the decedent.

1. Age/Cause, Sex/Cause Edits

Table G lists the consistency edits applicable to codes given earlier in Table B (codes valid for both multiple and underlying causes of death). Table H lists consistency edits applicable to codes given earlier in Tables C and D (codes valid for multiple cause coding only). The limitations embody the concept that certain combinations of cause of death with age or sex are either impossible (absolute limitation) or that the combinations are highly improbable (conditional limitation). The causes of death shown in these lists include age and/or sex conditional or absolute limitations explicit in ICD-9. Additional conditional limitation edits are applied to ICD-9 categories where occurrence of the category with particular age/sex combinations is considered to be highly improbable or where experience has shown that a particular cause is especially prone to coding error.

Detailed instructions for processing edit rejects are given in Part 2d of this Vital Statistics Instruction Manual series. In general, the source document is examined to determine if the medical and demographic data are accurately coded based on reporting. Where inaccurate, the codes in error are corrected. When coded data agree with reported information, no change is made if the edit is conditional in nature. If the edit is absolute, the age (or sex) is arbitrarily retained as coded, and the cause(s) are changed to the minimum necessary to pass the edit.

2. Infrequent and Rare Cause-of-Death Edits

Table I contains a list of infrequent and rare causes of death in the United States. If one of these diseases is reported as a cause of death, the diagnosis should have been confirmed by the certifier or the State Health Officer. A notation of confirmation should be recorded on the copy of the certificate sent to NCHS. In the absence of this notation, the State Health Officer will be contacted at the time of reconciliation of rejected data records to confirm the accuracy of the certification.

3. Place-of-Occurrence Edits for Non-Transport Accidents

Table J lists the place of occurrence edits for non-transport accidents (ICD-9 E850-E869, E880-E928). The table includes valid ICD-9 fifth digit place-of-occurrence codes that denote the place where the accident or poisoning occurred and includes the fifth digits to which invalid codes are allocated.

III. CURRENT MORTALITY SAMPLE EDITS

A. Demographic Items

Table K provides for each variable category any absolute limitations and the imputed results. All edits are absolute and result in imputation of the result as opposed to reject list reconciliation.

B. Underlying Cause of Death

The ICD-9 codes valid for CMS coding are given in Table B; invalid codes are given in Table E. They are the same as for the total mortality file. Multiple cause-of-death data are not coded for the CMS. The mainframe edit procedure does not validate each code to the four-digit level. Rather, each code is automatically converted to its corresponding 72 cause list upcode and the list of 10 selected causes of infant deaths by imputation (see Part 9 of this Vital Statistics Instruction Manual series for these lists--the minimum level of detail published for the CMS).

C. Consistency Edit

These computer edits check for age/cause, sex/cause consistency. They are absolute in nature. When a fail edit occurs for age/cause, the age is changed to "not stated." For sex/cause, the sex code is changed to the opposite sex. In both cases, the cause is assumed to be correct. The age and sex limitations for CMS edits are provided in Table L.

TABLE A

EDITS FOR DEMOGRAPHIC ITEMS

<u>Variable</u>	<u>Edit Criterion</u>	<u>Fail Edit Corrected By</u>
Sex	Code must be valid	Imputation: If last digit of certificate number is odd number, sex is assigned female code. If last digit of certificate number is even number, sex is assigned male code.
Date of Death: Month	Code must be valid and other than "not stated"	Imputation: Date of death from last preceding record containing a valid date of death is substituted.
Day	Code must be valid (month is valid also)	Imputation: Assign to "not classifiable" code.
Age of Decedent: Number of Units	Both codes must be valid	Imputation: Assign to "not classifiable" code (999).
Units	Combination of unit and number of units must be acceptable.	(See page 9.)

Table A - EDITS FOR DEMOGRAPHIC ITEMS - Continued

IF UNIT OF AGE IS:	AND NO. OF UNITS IS:	THEN FINAL EDITED AGE IS:
9 (not classifiable)	Anything _____)	
Codes 0, 2-6	00 _____)	
Code 1 (100 or more years)	Greater than 35 _____)	
Code 2 (months)	Greater than 23 _____)	
Code 3 (weeks)	Greater than 47 _____)	999 (not
Code 4 (days)	Greater than 60 _____)	classifiable)
Code 5 (hours)	Greater than 72 _____)	
Code 6 (minutes)	Greater than 95 _____)	
Code 0 (years - less than 100)	01-99	001-099
Code 1 (100 or more years)	00-35	100-135
Code 2 (months)	01-11	201-211
Code 2 (months)	12-23	001 (1 year)
Code 3 (weeks)	01-03	301-303
Code 3 (weeks)	04-08	201 (1 month)
Code 3 (weeks)	09-12	202 (2 months)
" " "	13-17	203 (3 months)
" " "	18-21	204 (4 months)
" " "	22-25	205 (5 months)
" " "	26-29	206 (6 months)
" " "	30-34	207 (7 months)
" " "	35-38	208 (8 months)
" " "	39-42	209 (9 months)
" " "	43-47	210 (10 months)
Code 4 (days)	01-27	401-427
" " "	28-59	201 (1 month)
" " "	60	202 (2 months)
Code 5 (hours)	01-23	501-523
Code 5 (hours)	24-72	401-403 (days)
Code 6 (minutes)	01-59	601-659
Code 6 (minutes)	60-95	501 (1 hour)
Codes 2-6 (months-minutes)	99 (no. of units not classifiable)	2-6, 99*

*In the age recoding process, unknown number of months is allocated to 1 month; unknown number of weeks is allocated to 1 week; unknown number of days is allocated to 1 day; unknown number of hours is allocated to under 1 hour; unknown number of minutes is allocated to under 1 hour.

Table A - EDITS FOR DEMOGRAPHIC ITEMS - Continued

<u>Variable</u>	<u>Edit Criterion</u>	<u>Fail Edit Corrected By</u>
Date of Birth: Month	Code must be valid.	Imputation: Assign to "not classifiable" code.
Day	Code must be valid.	Imputation: Assign to "not classifiable" code.
Year	Code must be valid. 1854-1989 are valid for 1989. For subsequent data years, add 1 to the lower and upper limits of the range (e.g. for 1990, the range is 1855-1990).	Imputation: Assign to "not classifiable" code.
State of Birth of Decedent	Code must be valid.	Imputation: Convert invalid code to "not classifiable" code.
Place of Death: State/County	State/county code combination must be valid	Reject for correction
Type of Place of Death	Code must be valid.	Imputation: Convert invalid code to "not classifiable" code.
Marital Status of Decedent	Code must be valid.	Imputation: Convert invalid code to "not classifiable" code.
	If age of decedent is less than 12 years, marital status must be "single."	Imputation: Convert to "single code."
Occupation of Decedent	Code must be valid	Imputation: Convert invalid code to "not classifiable" code.
Type of Industry	Code must be valid	Imputation: Convert invalid code to "not classifiable" code.

Table A - EDITS FOR DEMOGRAPHIC ITEMS - Continued

<u>Variable</u>	<u>Edit Criterion</u>	<u>Fail Edit Corrected By</u>
Residence of Decedent	State, County/City code combination must be valid.	Reject for correction.
Hispanic Origin of Decedent	Code must be valid	Imputation: Convert invalid code to "not classifiable" code.
Race of Decedent	Code must be valid and other than "not stated"	Imputation: If preceding record was coded white, the code assignment is made to white; if the code is other than white, assignment is made to black.
Education of Decedent	Code must be valid.	Imputation: Assign to unknown code.
	Combination of education and age must be acceptable.	Imputation: If education is greater than the maximum shown for given age, assign education to unknown code.
	Age	Maximum Education
	under 5 years	00
	5 years	01
	6 years	02
	7 years	03
	8 years	04
	9 years	05
	10 years	06
	11 years	07
	12 years	08
	13 years	09
	14 years	10
	15 years	11
	16 years	12
	17 years	13
	18 years	14
	19 years	15
Autopsy	Code must be valid.	Imputation: Convert invalid code to "not classifiable" code.

TABLE B
ICD-9 CODES VALID FOR BOTH UNDERLYING AND MULTIPLE CAUSE OF DEATH CLASSIFICATION

0010	0092	0201	0340	0449	0559	0722	0832	0930	1100	1213	1279	1411	1488	1568	1700	1800	1899	2011	2106	2166	2274
0011	0100	0202	0341	0450	0560	0723	0838	0931	1101	1214	1280	1412	1489	1569	1701	1801	1900	2012	2107	2167	2275
0019	0101	0203	035	0451	0567	0727	0839	0932	1102	1215	1281	1413	1490	1570	1702	1808	1901	2014	2108	2168	2276
0020	0108	0204	0360	0452	0568	0728	0840	0938	1103	1216	1288	1414	1491	1571	1703	1809	1902	2015	2109	2169	2278
0021	0109	0205	0361	0459	0569	0729	0841	0939	1104	1218	1289	1415	1498	1572	1704	181	1903	2016	2110	217	2279
0022	0110	0208	0362	0460	0570	073	0842	0940	1105	1219	129	1416	1499	1573	1705	1820	1904	2017	2111	218	2280
0023	0111	0209	0363	0461	0578	0740	0843	0941	1106	1220	130	1418	1500	1574	1706	1821	1905	2019	2112	2190	2281
0029	0112	021	0364	0462	0579	0741	0844	0942	1108	1221	1310	1419	1501	1578	1707	1828	1906	2020	2113	2191	2290
0030	0113	0220	0368	0463	0600	0742	0845	0948	1109	1222	1318	1420	1502	1579	1708	1830	1907	2021	2114	2198	2298
0031	0114	0221	0369	0468	0601	0743	0846	0949	1110	1223	1319	1421	1503	1580	1709	1832	1908	2022	2115	2199	2299
0032	0115	0222	037	0469	0609	0748	0847	095	1111	1224	1320	1422	1504	1588	1710	1833	1909	2023	2116	220	2300
0038	0116	0223	0380	0470	061	075	0848	0970	1112	1225	1321	1428	1505	1589	1712	1834	1910	2024	2117	2210	2301
0039	0117	0228	0381	0471	0620	0760	0849	0979	1113	1226	1322	1429	1508	1590	1713	1835	1911	2025	2118	2211	2302
0040	0118	0229	0382	0478	0621	0761	0850	0980	1118	1227	1323	1430	1509	1591	1714	1838	1912	2026	2119	2212	2303
0041	0119	0230	0383	0479	0622	0769	0851	0981	1119	1228	1329	1431	1510	1598	1715	1839	1913	2028	2120	2218	2304
0042	0120	0231	0384	048	0623	0770	0852	0982	1120	1229	1330	1438	1511	1599	1716	1840	1914	2029	2121	2219	2305
0043	0121	0232	0388	0490	0624	0771	0853	0983	1121	1230	1338	1439	1512	1600	1717	1841	1915	2030	2122	2220	2306
0048	0122	0233	0389	0491	0625	0772	0854	0984	1122	1231	1339	1440	1513	1601	1718	1842	1916	2031	2123	2221	2307
0049	0123	0238	0390	0498	0628	0773	0855	0985	1123	1232	1340	1441	1514	1602	1719	1843	1917	2038	2124	2222	2308
0050	0128	0239	0391	0499	0629	0774	0859	0986	1124	1233	1341	1448	1515	1603	1720	1844	1918	2040	2125	2223	2309
0051	0130	024	0392	0500	0630	0778	0860	0987	1125	1234	1342	1449	1516	1604	1721	1848	1919	2041	2126	2224	2310
0052	0131	025	0393	0501	0631	0779	0861	0988	1128	1235	1348	1450	1518	1605	1722	1849	1920	2042	2127	2228	2311
0053	0138	0260	0394	0502	0632	0780	0862	0990	1129	1236	1349	1451	1519	1608	1723	185	1921	2048	2128	2229	2312
0054	0139	0261	0398	0509	0638	0781	0863	0991	114	1238	135	1452	1520	1609	1724	1860	1922	2049	2129	2230	2318
0058	014	0269	0399	0510	0639	0782	0864	0992	1150	1239	1360	1453	1521	1610	1725	1869	1923	2050	2130	2231	2319
0059	0150	0270	0400	0511	064	0783	0865	0993	1151	124	1361	1454	1522	1611	1726	1871	1928	2051	2131	2232	2320
0060	0151	0271	0401	0512	0650	0784	0869	0994	1159	1250	1362	1455	1523	1612	1727	1872	1929	2052	2132	2233	2321
0061	0152	0272	0402	0519	0651	0785	0870	0998	1160	1251	1363	1456	1528	1613	1728	1873	193	2053	2133	2238	2322
0062	0157	0278	0403	052	0652	0786	0871	0999	1161	1252	1364	1458	1529	1618	1729	1874	1940	2058	2134	2239	2323
0063	0158	0279	0408	0530	0653	0787	0879	1000	1162	1253	1365	1459	1530	1619	1730	1875	1941	2059	2135	2240	2324
0064	0159	0300	0410	0531	0654	0788	0880	1008	1170	1254	1368	1460	1531	1620	1731	1876	1943	2060	2136	2241	2325
0065	0160	0301	0411	0532	0658	0790	0888	1009	1171	1255	1369	1461	1532	1622	1732	1877	1944	2061	2137	2242	2326
0066	0161	0302	0412	0537	0659	0791	0889	101	1172	1256	1370	1462	1533	1623	1733	1878	1945	2062	2138	2243	2327
0068	0162	0303	0413	0538	0660	0792	0900	1020	1173	1257	1371	1463	1534	1624	1734	1879	1946	2068	2139	2244	2328
0069	0163	0308	0414	0539	0661	0793	0902	1021	1174	1259	1372	1464	1535	1625	1735	1880	1948	2069	214	2245	2329
0070	0164	0309	0415	0540	0662	0798	0903	1022	1175	1260	1373	1465	1536	1628	1736	1881	1949	2070	2150	2246	2330
0071	0169	0310	0416	0541	0663	0799	0904	1023	1176	1261	1374	1466	1537	1629	1737	1882	1950	2071	2152	2247	2331
0072	0170	0311	0417	0542	0668	080	0905	1024	1177	1262	138	1467	1538	1630	1738	1883	1951	2072	2153	2248	2332
0073	0171	0318	0418	0543	0669	0810	0907	1025	1178	1263	1390	1468	1539	1631	1739	1884	1952	2078	2154	2249	2333
0078	0172	0319	0419	0544	0700	0811	0909	1026	1179	1268	1391	1469	1540	1638	1740	1885	1953	2080	2155	2250	2334
0079	0173	0320	0420	0545	0701	0812	0910	1027	118	1269	1398	1470	1541	1639	1741	1886	1954	2081	2156	2251	2335
0080	0174	0321	0421	0546	0702	0819	0911	1029	1200	1270	1400	1471	1542	1640	1742	1887	1955	2082	2157	2252	2336
0081	0175	0322	0422	0547	0703	0820	0912	1030	1201	1271	1401	1472	1543	1641	1743	1888	1958	2088	2158	2253	2337
0082	0176	0323	0429	0548	0704	0821	0913	1031	1202	1272	1403	1473	1548	1642	1744	1889	1990	2089	2159	2254	2339
0083	0177	0328	0430	0549	0705	0822	0914	1032	1203	1273	1404	1478	1550	1643	1745	1890	1991	2100	2160	2258	2340
0084	0178	0329	0431	0550	0706	0823	0915	1033	1208	1274	1405	1479	1551	1648	1746	1891	2000	2101	2161	2259	2348
0085	0180	0330	0432	0551	0709	0828	0916	1039	1209	1275	1406	1480	1552	1649	1748	1892	2001	2102	2162	226	2349
0086	0188	0331	0433	0552	071	0829	0917	1040	1210	1276	1408	1481	1560	1650	1749	1893	2002	2103	2163	2270	2350
0088	0189	0338	0439	0557	0720	0830	0918	1048	1211	1277	1409	1482	1561	1658	175	1894	2008	2104	2164	2271	2351
0090	0200	0339	0440	0558	0721	0831	0919	1049	1212	1278	1410	1483	1562	1659	179	1898	2010	2105	2165	2273	2352

TABLE B
 ICD-9 CODES VALID FOR BOTH UNDERLYING AND MULTIPLE CAUSE OF DEATH CLASSIFICATION

2353	2420	2534	2640	2725	2793	2880	2957	3021	3080	3200	3358	3482	3556	3628	3683	3742	3800	3872	4039	4267	4402
2354	2421	2535	2641	2726	2794	2881	2958	3022	3081	3201	3359	3483	3557	3629	3684	3743	3801	3878	4040	4268	4408
2355	2422	2536	2642	2727	2798	2882	2959	3023	3082	3202	3360	3484	3558	3630	3685	3744	3802	3879	4041	4269	4409
2356	2423	2537	2643	2728	2799	2883	2960	3024	3083	3203	3361	3485	3559	3631	3686	3745	3803	3880	4049	4270	4410
2357	2424	2538	2644	2729	280	2888	2961	3025	3084	3208	3368	3488	3560	3632	3688	3748	3804	3881	410	4271	4411
2358	2428	2539	2645	2730	2810	2889	2962	3026	3089	3209	3369	3489	3561	3633	3689	3749	3805	3882	411	4272	4412
2359	2429	2540	2646	2731	2811	2890	2963	3027	3090	3220	3370	3490	3562	3634	3690	3750	3808	3883	412	4273	4413
2360	243	2541	2647	2732	2812	2891	2964	3028	3091	3221	3379	3491	3563	3635	3691	3751	3809	3884	413	4274	4414
2361	2441	2548	2648	2733	2813	2892	2965	3029	3092	3222	340	3492	3564	3636	3692	3752	3810	3885	4140	4275	4415
2362	2442	2549	2649	2738	2814	2893	2966	303	3093	3229	3410	3498	3568	3637	3693	3753	3811	3886	4141	4276	4416
2363	2443	2550	2650	2739	2818	2894	2968	3040	3094	3235	3411	3499	3569	3638	3696	3754	3812	3887	4148	4278	4420
2364	2448	2551	2651	2740	2819	2895	2969	3041	3098	3238	3418	3501	3570	3639	3697	3755	3813	3888	4149	4279	4421
2365	2449	2552	2652	2741	2820	2896	2970	3042	3099	3239	3419	3502	3575	3640	3698	3756	3814	3889	4150	4280	4422
2366	2450	2553	2660	2748	2821	2897	2971	3043	3100	3240	3420	3508	3576	3641	3699	3758	3815	3890	4151	4281	4423
2367	2451	2554	2661	2749	2822	2898	2972	3044	3101	3241	3421	3509	3577	3642	3700	3759	3816	3891	4160	4289	4428
2369	2452	2555	2662	2750	2823	2899	2973	3045	3102	3249	3429	3510	3578	3643	3702	3760	3817	3892	4161	4290	4429
2370	2453	2556	2669	2751	2824	2900	2978	3046	3108	325	3430	3511	3579	3644	3703	3761	3818	3897	4168	4291	4430
2371	2454	2558	267	2752	2825	2901	2979	3047	3109	326	3431	3518	3580	3645	3704	3763	3819	3898	4169	4292	4431
2372	2458	2559	2680	2753	2826	2902	2980	3048	311	3300	3432	3519	3582	3646	3705	3764	3820	3899	4170	4293	4438
2373	2459	2560	2681	2754	2827	2903	2981	3049	3120	3301	3433	3520	3588	3647	3706	3765	3821	390	4171	4295	4439
2374	2460	2561	2682	2758	2828	2904	2982	3050	3121	3308	3434	3521	3589	3648	3708	3766	3822	3910	4178	4296	4440
2375	2461	2562	2689	2759	2829	2908	2983	3051	3122	3309	3438	3522	3590	3649	3709	3768	3823	3911	4179	4298	4441
2376	2462	2563	2690	2760	2830	2909	2984	3052	3123	3310	3439	3523	3591	3650	3710	3769	3824	3912	4209	4299	4442
2377	2463	2564	2691	2761	2831	2910	2988	3053	3128	3311	3440	3524	3592	3651	3711	3770	3829	3918	4210	431	4448
2379	2468	2568	2692	2762	2832	2911	2989	3054	3129	3312	3441	3525	3593	3652	3712	3771	3830	3919	4219	4320	4449
2380	2469	2569	2693	2763	2839	2912	2990	3055	3130	3313	3442	3526	3594	3653	3713	3772	3831	3920	4229	4321	4460
2381	2500	2570	2698	2764	2840	2913	2991	3056	3131	3314	3443	3529	3598	3654	3714	3773	3832	3929	4230	4329	4461
2382	2501	2571	2699	2765	2848	2914	2998	3057	3132	3318	3444	3530	3599	3655	3715	3774	3838	393	4231	4330	4462
2383	2502	2572	2700	2766	2849	2915	2999	3058	3133	3319	3445	3531	3600	3656	3716	3775	3839	3940	4232	4331	4463
2384	2503	2578	2701	2767	2850	2918	3000	3059	3138	3320	3446	3532	3601	3658	3717	3776	3840	3941	4238	4332	4464
2385	2504	2579	2702	2768	2851	2919	3001	3060	3139	3321	3448	3533	3602	3659	3718	3777	3841	3942	4239	4333	4465
2386	2505	2580	2703	2769	2858	2920	3002	3061	3140	3330	3449	3534	3603	3660	3719	3779	3842	3949	4240	4338	4466
2387	2506	2581	2704	2770	2859	2921	3003	3062	3141	3331	3450	3535	3604	3661	3720	3780	3848	3950	4241	4339	4467
2388	2507	2588	2705	2771	2860	2922	3004	3063	3142	3332	3451	3536	3605	3662	3721	3781	3849	3951	4242	4340	4470
2389	2509	2589	2706	2772	2861	2928	3005	3064	3148	3333	3452	3538	3606	3663	3722	3782	3850	3952	4243	4341	4471
2390	2510	2590	2707	2773	2862	2929	3006	3065	3149	3334	3453	3539	3608	3664	3723	3783	3851	3959	4249	4349	4472
2391	2511	2591	2708	2774	2863	2930	3007	3066	3150	3335	3454	3540	3609	3665	3724	3784	3852	396	4250	435	4473
2392	2512	2592	2709	2775	2864	2931	3008	3067	3151	3336	3455	3541	3610	3668	3725	3785	3853	3970	4251	436	4474
2393	2514	2593	2710	2776	2865	2938	3009	3068	3152	3337	3456	3542	3611	3669	3726	3786	3858	3971	4252	4370	4475
2394	2515	2594	2711	2778	2866	2939	3010	3069	3153	3338	3457	3543	3612	3670	3727	3787	3859	3979	4253	4371	4476
2395	2518	2598	2712	2779	2867	2940	3011	3070	3154	3339	3458	3544	3613	3671	3728	3788	3860	3980	4254	4372	4478
2396	2519	2599	2713	2780	2869	2948	3012	3071	3155	3340	3459	3545	3618	3672	3729	3789	3861	3989	4255	4373	4479
2397	2520	260	2714	2781	2870	2949	3013	3072	3158	3341	3460	3548	3619	3673	3730	3790	3862	4010	4259	4374	4480
2398	2521	261	2718	2782	2871	2950	3014	3073	3159	3342	3461	3549	3621	3674	3731	3791	3863	4011	4260	4375	4481
2399	2528	262	2719	2783	2872	2951	3015	3074	316	3343	3462	3550	3622	3675	3732	3792	3864	4019	4261	4376	4489
2400	2529	2630	2720	2784	2873	2952	3016	3075	317	3348	3468	3551	3623	3678	3733	3793	3865	4020	4262	4378	4510
2409	2530	2631	2721	2788	2874	2953	3017	3076	3180	3349	3469	3552	3624	3679	3738	3794	3868	4021	4263	4379	4511
2410	2531	2632	2722	2790	2875	2954	3018	3077	3181	3350	347	3553	3625	3680	3739	3795	3869	4029	4264	438	4512
2411	2532	2638	2723	2791	2878	2955	3019	3078	3182	3351	3480	3554	3626	3681	3740	3798	3870	4030	4265	4400	4518
2419	2533	2639	2724	2792	2879	2956	3020	3079	319	3352	3481	3555	3627	3682	3741	3799	3871	4031	4266	4401	4519

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452	4641	4820	5080	5216	5274	5326	5509	5679	5764	5881	5981	6103	6186	6241	6338	6388	655	6861	6983	7098	7185
4530	4642	4821	5081	5217	5275	5327	5510	5680	5765	5888	5982	6104	6187	6242	6339	6389	656	6868	6984	7099	7186
4531	4643	4822	5088	5218	5276	5329	5511	5688	5768	5889	5988	6108	6188	6243	6340	640	657	6869	6988	7100	7188
4532	4644	4823	5089	5219	5277	5330	5512	5689	5769	5890	5989	6109	6189	6244	6341	641	658	690	6989	7101	7189
4533	4650	4824	5100	5220	5278	5331	5513	5690	5770	5891	5990	6110	6190	6245	6342	6420	659	6910	700	7102	7190
4538	4658	4828	5109	5221	5279	5332	5518	5691	5771	5899	5991	6111	6191	6246	6343	6421	660	6918	7010	7103	7191
4539	4659	4829	5110	5222	5280	5333	5519	5692	5772	5900	5992	6112	6192	6248	6344	6422	661	6920	7011	7104	7192
4540	4660	483	5111	5223	5281	5334	5520	5693	5778	5901	5993	6113	6198	6249	6345	6423	662	6921	7012	7108	7193
4541	4661	485	5118	5224	5282	5335	5521	5694	5779	5902	5994	6114	6199	6250	6346	6424	663	6922	7013	7109	7194
4542	470	486	5119	5225	5283	5336	5522	5695	5780	5903	5995	6115	6200	6251	6347	6425	664	6923	7014	7110	7195
4549	4710	4870	512	5226	5284	5337	5523	5698	5781	5908	5996	6116	6201	6252	6348	6426	665	6924	7015	7119	7196
4550	4711	4871	5130	5227	5285	5339	5528	5699	5789	5909	5997	6117	6202	6253	6349	6427	666	6925	7018	7128	7197
4551	4718	4878	5131	5228	5286	5340	5529	5710	5790	591	5998	6118	6203	6254	6350	6429	667	6926	7019	7129	7198
4552	4719	490	514	5229	5287	5341	5530	5711	5791	5920	5999	6119	6204	6255	6351	643	668	6927	702	7140	7199
4553	4720	4910	515	5230	5288	5342	5531	5712	5794	5921	600	6140	6205	6256	6352	644	669	6928	7030	7141	7200
4554	4721	4911	5160	5231	5289	5343	5532	5713	5798	5929	6010	6141	6206	6258	6353	645	670	6929	7038	7142	7201
4555	4722	4912	5162	5232	5290	5344	5533	5714	5799	5930	6011	6142	6207	6259	6354	6460	671	6930	7039	7143	7202
4556	4730	4918	5163	5233	5291	5345	5538	5715	5800	5931	6012	6143	6208	6260	6355	6461	672	6931	7040	7144	7208
4557	4731	4919	5168	5234	5292	5346	5539	5716	5804	5932	6013	6144	6209	6261	6356	6462	673	6938	7041	7148	7209
4558	4732	492	5169	5235	5293	5347	5550	5718	5808	5933	6018	6145	6210	6262	6357	6463	674	6939	7042	7149	7210
4559	4733	4930	5180	5236	5294	5349	5551	5719	5809	5934	6019	6146	6211	6263	6358	6464	675	6940	7043	7150	7211
4560	4738	4931	5181	5238	5295	5350	5552	5720	5810	5935	6020	6147	6212	6264	6359	6465	676	6941	7048	7151	7212
4561	4739	4939	5182	5239	5296	5351	5559	5721	5811	5936	6021	6148	6213	6265	6360	6466	6800	6942	7049	7152	7213
4563	4740	494	5183	5240	5298	5352	556	5722	5812	5937	6022	6149	6214	6266	6361	6467	6801	6943	7050	7153	7214
4564	4741	4950	5184	5241	5299	5353	5570	5723	5813	5938	6028	6150	6215	6267	6362	6468	6802	6944	7051	7158	7215
4565	4742	4951	5185	5242	5300	5354	5571	5724	5818	5939	6029	6151	6216	6268	6363	6469	6803	6945	7058	7159	7216
4566	4748	4952	5188	5243	5301	5355	5579	5728	5819	5940	6030	6159	6217	6269	6364	6470	6804	6946	7059	7160	7217
4568	4749	4953	5190	5244	5302	5356	558	5730	5820	5941	6031	6160	6218	6270	6365	6471	6805	6948	7060	7161	7218
4571	475	4954	5191	5245	5303	5360	5600	5733	5821	5942	6038	6161	6219	6271	6366	6472	6806	6949	7061	7162	7219
4572	4760	4955	5192	5246	5304	5361	5601	5734	5822	5948	6039	6162	6220	6272	6367	6473	6807	6950	7062	7163	7220
4578	4761	4956	5193	5248	5305	5362	5602	5738	5824	5949	6040	6163	6221	6273	6368	6474	6808	6951	7063	7164	7221
4579	4770	4957	5194	5249	5306	5368	5603	5739	5828	5950	6049	6164	6222	6274	6369	6475	6809	6952	7068	7165	7222
4580	4778	4958	5198	5250	5307	5369	5608	5740	5829	5951	605	6165	6223	6278	6370	6476	6810	6953	7069	7166	7223
4581	4779	4959	5199	5251	5308	5370	5609	5741	5830	5952	606	6168	6224	6279	6371	6478	6811	6954	7070	7168	7224
4589	4780	496	5200	5252	5309	5371	5620	5742	5831	5953	6070	6169	6225	6280	6372	6479	6819	6958	7071	7169	7225
4590	4781	500	5201	5253	5310	5372	5621	5743	5832	5958	6071	6170	6226	6282	6373	6480	6820	6959	7078	7170	7226
4591	4782	501	5202	5258	5311	5373	5640	5744	5834	5959	6072	6171	6227	6283	6374	6481	6821	6960	7079	7171	7227
4592	4783	502	5203	5259	5312	5374	5641	5745	5836	5960	6073	6172	6228	6284	6375	6482	6822	6961	7080	7172	7228
4598	4784	503	5204	5260	5313	5375	5644	5750	5837	5961	6078	6173	6229	6288	6376	6483	6823	6962	7081	7173	7229
4599	4785	504	5205	5261	5314	5376	5645	5751	5838	5962	6079	6174	6230	6289	6377	6484	6824	6963	7082	7174	7230
460	4786	505	5206	5262	5315	5378	5646	5752	5839	5963	6080	6175	6231	6290	6378	6485	6825	6964	7083	7175	7231
4610	4787	5060	5207	5263	5316	5379	5647	5753	5845	5964	6081	6176	6232	6291	6379	6486	6826	6965	7084	7176	7232
4611	4788	5061	5208	5264	5317	5400	5648	5754	5846	5965	6082	6178	6233	6298	6380	6487	6827	6968	7085	7177	7233
4612	4789	5062	5209	5265	5319	5401	5649	5755	5847	5966	6083	6179	6234	6299	6381	6488	6828	6970	7088	7178	7234
4613	4800	5063	5210	5268	5320	5409	5650	5756	5848	5967	6084	6180	6235	630	6382	6489	6829	6971	7089	7179	7235
4618	4801	5064	5211	5269	5321	541	5651	5758	5849	5968	6088	6181	6236	631	6383	650	683	6978	7090	7180	7236
4619	4802	5069	5212	5270	5322	542	566	5759	585	5969	6089	6182	6237	632	6384	651	684	6979	7091	7181	7237
462	4808	5070	5213	5271	5323	543	5671	5761	586	5970	6100	6183	6238	6330	6385	652	6850	6980	7092	7182	7238
463	4809	5071	5214	5272	5324	5500	5672	5762	587	5978	6101	6184	6239	6331	6386	653	6851	6981	7093	7183	7239
4640	481	5078	5215	5273	5325	5501	5678	5763	5880	5980	6102	6185	6240	6332	6387	654	6860	6982	7094	7184	7240

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7241	7302	7380	7450	7509	7561	7612	7685	7755	7808	7863	7917	7993	8078	8148	8198	8248	8311	8366	8429	8529	8624
7242	7303	7381	7451	7510	7562	7613	7686	7756	7809	7864	7919	7994	8079	8149	8199	8249	8312	8368	8430	8530	8629
7243	7309	7382	7452	7511	7563	7614	7689	7757	7810	7865	7920	7998	8100	8150	8200	8250	8313	8369	8431	8531	8630
7244	7310	7383	7453	7512	7564	7615	769	7758	7811	7866	7921	7999	8101	8151	8201	8251	8314	8370	8432	8532	8631
7245	7312	7384	7454	7513	7565	7616	7700	7759	7812	7867	7922	8000	8102	8152	8202	8252	8315	8371	8433	8538	8632
7246	7320	7385	7455	7514	7566	7617	7701	7760	7813	7868	7923	8001	8103	8153	8203	8253	8316	8372	8434	8539	8633
7247	7321	7386	7456	7515	7567	7618	7702	7761	7814	7869	7924	8002	8104	8154	8204	8254	8318	8373	8435	8540	8634
7248	7322	7387	7457	7516	7568	7619	7703	7762	7815	7870	7929	8003	8105	8155	8205	8255	8319	8374	8436	8541	8635
7249	7323	7388	7458	7517	7569	7620	7704	7763	7816	7871	7930	8008	8106	8156	8206	8256	8320	8375	8437	8542	8636
725	7324	7389	7459	7518	7570	7621	7705	7764	7817	7872	7931	8009	8107	8157	8207	8257	8321	8376	8438	8543	8637
7260	7325	7390	7460	7519	7571	7622	7706	7765	7819	7873	7932	8010	8108	8158	8208	8258	8322	8378	8439	8550	8638
7261	7326	7391	7461	7520	7572	7623	7707	7766	7820	7874	7933	8011	8109	8159	8209	8259	8323	8379	8440	8551	8639
7262	7327	7392	7462	7521	7573	7624	7708	7767	7821	7875	7934	8012	8110	8160	8210	8260	8324	8380	8441	8552	8640
7263	7328	7393	7463	7522	7574	7625	7709	7768	7822	7876	7935	8013	8111	8161	8211	8261	8325	8381	8442	8553	8641
7264	7329	7394	7464	7523	7575	7626	7710	7769	7823	7877	7936	8018	8112	8162	8212	8262	8326	8382	8443	8554	8642
7265	7330	7395	7465	7524	7576	7627	7711	7771	7824	7879	7937	8019	8113	8163	8213	8263	8328	8383	8444	8555	8643
7266	7331	7396	7466	7525	7578	7628	7712	7772	7825	7880	7938	8020	8114	8164	8214	8264	8329	8384	8445	8556	8644
7267	7332	7397	7467	7526	7579	7629	7713	7773	7826	7881	7939	8021	8115	8165	8215	8268	8330	8385	8446	8558	8650
7268	7333	7398	7468	7527	7580	7630	7714	7774	7827	7882	7940	8022	8116	8166	8216	8269	8331	8386	8447	8559	8651
7269	7334	7399	7469	7528	7581	7631	7715	7775	7828	7883	7941	8023	8117	8167	8217	8270	8332	8388	8448	856	8652
7270	7335	7400	7470	7529	7582	7632	7716	7776	7829	7884	7942	8028	8118	8168	8218	8271	8333	8389	8449	857	8653
7271	7336	7401	7471	7530	7583	7633	7717	7778	7830	7885	7943	8029	8119	8169	8219	8272	8334	8400	8450	8580	8654
7272	7337	7402	7472	7531	7584	7634	7718	7779	7831	7886	7944	8030	8120	8170	8220	8273	8335	8401	8451	8581	8655
7273	7338	7410	7473	7532	7585	7635	7720	7780	7832	7887	7945	8031	8121	8171	8221	8274	8336	8402	8452	8582	8658
7274	7339	7419	7474	7533	7586	7636	7721	7781	7833	7888	7946	8032	8122	8172	8222	8278	8338	8403	8453	8583	8659
7275	734	7420	7475	7534	7587	7637	7722	7782	7834	7889	7947	8033	8123	8173	8223	8279	8339	8404	8454	8584	8660
7276	7350	7421	7476	7535	7588	7638	7723	7783	7835	7890	7948	8038	8124	8174	8224	8280	8340	8405	8455	8585	8661
7278	7351	7422	7478	7536	7589	7639	7724	7784	7836	7891	7949	8039	8125	8175	8225	8281	8341	8406	8456	8586	8662
7279	7352	7423	7479	7537	7590	7640	7725	7785	7839	7892	7950	8040	8126	8176	8226	8282	8342	8407	8457	8587	8663
7280	7353	7424	7480	7538	7591	7641	7726	7786	7840	7893	7951	8041	8127	8177	8227	8283	8343	8408	8458	8588	8664
7281	7354	7425	7481	7539	7592	7642	7728	7787	7841	7894	7952	8042	8128	8178	8228	8284	8344	8409	8459	8589	8665
7282	7355	7428	7482	7540	7593	7649	7729	7788	7842	7895	7953	8043	8129	8179	8229	8288	8345	8410	846	8600	8666
7283	7358	7429	7483	7541	7594	7650	7730	7789	7843	7899	7954	8048	8130	8180	8230	8289	8346	8411	847	8601	8667
7284	7359	7430	7484	7542	7595	7651	7731	7790	7844	7900	7955	8049	8131	8181	8231	8290	8348	8412	848	8602	8668
7285	7360	7431	7485	7543	7596	7660	7732	7791	7845	7901	7956	8050	8132	8182	8232	8291	8349	8413	8500	8603	8669
7286	7361	7432	7486	7544	7597	7661	7733	7792	7846	7902	7957	8051	8133	8183	8233	8292	8350	8414	8501	8604	867
7287	7362	7433	7488	7545	7598	7662	7734	7793	7847	7903	7960	8052	8134	8184	8234	8293	8351	8415	8502	8608	8680
7288	7363	7434	7489	7546	7599	7670	7735	7794	7848	7904	7961	8053	8135	8185	8235	8294	8352	8416	8503	8609	8681
7289	7364	7435	7490	7547	7600	7671	7741	7795	7849	7905	7962	8058	8136	8186	8236	8298	8353	8417	8504	8610	8682
7290	7365	7436	7491	7548	7601	7672	7742	7796	7850	7906	7963	8059	8137	8187	8237	8299	8354	8418	8505	8611	8683
7291	7366	7438	7492	7550	7602	7673	7743	7798	7851	7907	7964	8060	8138	8188	8238	8300	8355	8419	8508	8612	8688
7292	7367	7439	7500	7551	7603	7674	7744	7799	7852	7908	7969	8061	8139	8189	8239	8301	8356	8420	8509	8613	8689
7293	7368	7440	7501	7552	7604	7675	7745	7800	7853	7909	797	8062	8140	8190	8240	8302	8358	8421	851	8614	8690
7294	7369	7441	7502	7553	7605	7676	7746	7801	7854	7910	7980	8063	8141	8191	8241	8303	8359	8422	8520	8615	8691
7295	7370	7442	7503	7554	7606	7677	7747	7802	7855	7911	7981	8068	8142	8192	8242	8304	8360	8423	8521	8616	8692
7296	7371	7443	7504	7555	7607	7678	7750	7803	7856	7912	7982	8069	8143	8193	8243	8305	8361	8424	8522	8619	8693
7298	7372	7444	7505	7556	7608	7679	7751	7804	7859	7913	7989	8070	8144	8194	8244	8306	8362	8425	8523	8620	8698
7299	7373	7445	7506	7558	7609	7682	7752	7805	7860	7914	7990	8071	8145	8195	8245	8308	8363	8426	8524	8621	8699
7300	7378	7448	7507	7559	7610	7683	7753	7806	7861	7915	7991	8072	8146	8196	8246	8309	8364	8427	8525	8622	8700
7301	7379	7449	7508	7560	7611	7684	7754	7807	7862	7916	7992	8073	8147	8197	8247	8310	8365	8428	8528	8623	8701

TABLE B
ICD-9 CODES VALID FOR BOTH UNDERLYING AND MULTIPLE CAUSE OF DEATH CLASSIFICATION

8702	8761	8910	9063	9219	9307	9361	9429	9486	9584	9803	994
8703	8762	8911	9064	9220	9308	9362	9430	9488	9585	9804	995
8704	8763	8912	9068	9221	9309	9363	9431	9489	9586	9805	996
8705	8764	8913	9069	9222	9310	9364	9432	9490	9587	9806	9970
8706	8765	8918	907	9223	9311	9370	9433	9491	9588	9807	9971
8707	8768	8919	908	9228	9312	9371	9434	9492	9589	9808	9972
8708	8769	892	909	9229	9313	9372	9435	9493	959	9809	9978
8709	8780	8930	9100	9230	9314	9373	9436	9494	9600	9810	9979
8710	8781	8931	9101	9231	9315	9374	9438	9495	9601	9811	998
8711	8782	8932	9102	9232	9316	9375	9439	9496	961	9818	999
8712	8783	8938	9103	9238	9317	9376	9440	9497	9620	9820	
8713	8784	8939	9104	9239	9318	9378	9441	9499	9621	9821	
8714	8785	894	9108	9240	9319	9379	9442	9500	9622	9828	
8715	8786	895	9109	9241	9320	9380	9443	9501	9629	9829	
8716	8788	896	911	9248	9321	9381	9444	9502	963	9830	
8717	8789	897	912	9249	9322	9382	9445	9503	964	9831	
8718	8790	8980	9130	9250	9323	9383	9446	9504	9650	9838	
8719	8791	8981	9131	9251	9324	9384	9447	9505	9651	9839	
8720	8792	899	9132	9252	9325	9385	9450	9506	9652	984	
8721	8793	9000	9133	9258	9326	9386	9451	9507	9653	9850	
8722	8794	9001	9138	9259	9327	9387	9452	9508	9654	9851	
8723	8795	9009	9139	9260	9328	9389	9453	9509	9655	9852	
8724	8796	9010	914	9261	9329	9390	9454	9510	9656	9853	
8725	8797	9011	915	9262	9330	9391	9455	9511	9657	9854	
8726	8798	9018	916	9263	9331	9392	9456	9518	9658	9855	
8728	8799	9019	9170	9264	9332	9393	9457	9520	9659	986	
8729	8800	9020	9171	9265	9333	9394	9458	9521	966	9870	
8730	8809	9021	9172	9268	9334	9395	9460	9528	9670	9871	
8731	8810	9022	9179	9269	9335	9396	9461	9529	9671	9872	
8732	8811	9028	918	927	9338	9397	9462	9530	9679	9879	
8733	882	9029	9190	9280	9339	9398	9463	9531	9680	9880	
8734	8830	903	9191	9281	9340	9399	9464	9538	9681	9881	
8735	8831	9040	9192	9282	9341	9400	9465	9539	9682	9882	
8736	8832	9041	9193	9288	9342	9401	9466	954	9683	9883	
8738	8839	9042	9194	9289	9343	9408	9467	9550	9684	9884	
8739	8840	9043	9195	9290	9344	9409	9468	9551	9688	9885	
8740	8841	9049	9196	9291	9345	9410	9469	9552	9689	9886	
8741	8842	9050	9197	9292	9346	9411	9470	9553	969	9887	
8742	8849	9051	9198	9293	9347	9412	9471	9554	970	9888	
8743	885	9052	9199	9294	9348	9413	9472	9555	971	9889	
8744	8860	9053	9200	9295	9349	9419	9473	9559	972	989	
8745	8869	9054	9201	9298	9350	9420	9474	956	973	9900	
8748	887	9055	9202	9299	9351	9421	9478	9570	974	9909	
8749	888	9056	9203	9300	9352	9422	9479	9571	975	9910	
8750	8900	9057	9204	9301	9353	9423	9480	9572	976	9911	
8751	8901	9058	9208	9302	9354	9424	9481	9579	977	9912	
8752	8902	9059	9209	9303	9355	9425	9482	9580	978	9913	
8758	8903	9060	9210	9304	9358	9426	9483	9581	9800	9919	
8759	8908	9061	9211	9305	9359	9427	9484	9582	9801	992	
8760	8909	9062	9218	9306	9360	9428	9485	9583	9802	993	

TABLE C

ICD-9 CODES VALID FOR MULTIPLE CAUSE CLASSIFICATION ONLY
(FROM CHAPTER XVII INJURY AND POISONING)

(00	(53	)058	)28	)480	)609	)664	)733	)792	)888	)952
(01	(54	)059	)29	)481	)610	)670	)734	)793	)889	)953
(02	(60	)060	)30	)482	)611	)671	)735	)794	)890	)954
(03	(61	)061	)31	)483	)612	)672	)736	)795	)891	)955
(05	(62	)062	)32	)484	)613	)673	)738	)796	)892	)958
(06	(63	)063	)33	)485	)614	)674	)739	)797	)893	)960
(07	(64	)064	)34	)486	)615	)675	)740	)799	)894	)961
(08	(65	)065	)35	)487	)616	)676	)741	)800	)895	)962
(09	(66	)066	)36	)488	)617	)678	)742	)801	)896	)963
(10	(67	)067	)37	)489	)618	)679	)743	)802	)897	)964
(11	(68	)068	)38	)490	)619	)680	)744	)803	)898	)965
(12	(69	)069	)39	)491	)620	)681	)745	)808	)899	)966
(13	(70	)070	)400	)492	)621	)682	)746	)809	)90	)967
(14	(71	)071	)401	)493	)622	)683	)747	)81	)910	)968
(15	(72	)072	)402	)494	)623	)684	)750	)820	)911	)969
(16	(73	)073	)403	)50	)624	)685	)751	)821	)912	)970
(17	(74	)074	)404	)51	)625	)686	)752	)822	)913	)971
(18	(75	)075	)405	)52	)626	)687	)753	)823	)914	)972
(19	(76	)079	)409	)53	)627	)689	)754	)824	)915	)973
(20	(77	)080	)410	)54	)628	)690	)755	)828	)916	)974
(21	(78	)081	)411	)55	)629	)691	)756	)830	)918	)975
(22	(79	)082	)412	)56	)630	)692	)757	)831	)919	)976
(23	(80	)083	)413	)57	)631	)693	)758	)832	)920	)979
(24	(81	)084	)414	)580	)632	)694	)760	)839	)921	)980
(25	(82	)085	)420	)581	)633	)695	)761	)840	)922	)981
(26	(83	)086	)421	)582	)634	)696	)762	)841	)923	)982
(27	(84	)089	)422	)583	)635	)697	)763	)848	)924	)983
(28	(85	)090	)423	)584	)638	)698	)764	)849	)925	)984
(29	(86	)091	)424	)585	)639	)699	)765	)850	)926	)985
(30	(87	)092	)430	)586	)640	)700	)766	)851	)927	)986
(31	(90	)093	)431	)587	)641	)701	)767	)852	)928	)987
(32	(91	)094	)432	)588	)642	)708	)768	)853	)929	)988
(33	(92	)099	)433	)590	)643	)709	)769	)854	)930	)989
(34	(93	)10	)434	)591	)644	)710	)770	)855	)931	)990
(35	(94	)11	)440	)592	)645	)711	)771	)856	)932	)991
(36	(95	)12	)441	)593	)646	)712	)772	)858	)933	)992
(37	(96	)13	)442	)594	)647	)713	)773	)859	)934	)993
(38	(97	)14	)443	)595	)648	)719	)774	)86	)938	)994
(39	)00	)15	)444	)596	)649	)720	)778	)870	)939	)995
(40	)01	)16	)450	)597	)650	)721	)779	)871	)940	)996
(41	)02	)17	)451	)598	)651	)722	)780	)872	)941	)997
(42	)03	)18	)452	)599	)654	)723	)781	)873	)942	)998
(43	)04	)19	)453	)600	)655	)724	)782	)874	)943	)999
(44	)050	)20	)454	)601	)656	)725	)783	)875	)944	
(45	)051	)21	)470	)602	)657	)726	)784	)876	)945	
(46	)052	)22	)471	)603	)658	)727	)785	)877	)946	
(47	)053	)23	)472	)604	)659	)728	)786	)878	)947	
(48	)054	)24	)473	)605	)660	)729	)788	)879	)948	
(50	)055	)25	)474	)606	)661	)730	)789	)880	)949	
(51	)056	)26	)478	)607	)662	)731	)790	)881	)950	
(52	)057	)27	)479	)608	)663	)732	)791	)882	)951	

TABLE D

ICD-9 CODES VALID FOR MULTIPLE CAUSE CLASSIFICATION ONLY
(FROM CHAPTERS I-XVI)

0901	1963	1976	1988	5793
0906	1965	1977	2440	6390
0920	1966	1978	2513	6391
0929	1968	1980	3833	6392
0943	1969	1981	4294	6393
096	1970	1982	4570	6394
0971	1971	1983	5642	6395
1028	1972	1984	5643	6396
1960	1973	1985	5696	6398
1961	1974	1986	5760	6399
1962	1975	1987	5792	7958

TABLE E

ARTIFICIAL CODES
AND THEIR COMPLEMENTARY ICD-9 CATEGORIES

<u>Artificial code</u>	<u>ICD-9 code</u>	<u>Artificial code</u>	<u>ICD-9 code</u>
0129	0119	5189	5188
4282	4290	5357	5378
4283	4291	5377	5379
4284	4292	5697	5698
4300	430	5700	570
4301	430	5701	570
4302	430	5729	5728
4424	7476	5826	5829
4425	7478	5827	5829
4879	4871	7997	7999

TABLE F

ICD-9 CODES NOT VALID FOR UNDERLYING AND/OR MULTIPLE CAUSE CLASSIFICATION

The following three-digit codes will be used in underlying cause and multiple cause classification. The fourth digits will not be used.

640-641, 643-645, 650-676

Codes Not Valid for Underlying Cause

009.1	320.4*	331.7*	373.4*	456.2*	601.4*	713*
009.3	320.5*	334.4*	373.5*	457.0	628.1*	730.4*
090.1	320.7*	336.2*	373.6*	484*	639	730.5*
090.6	321*	336.3*	376.2*	516.1*	711.1*	730.6*
092	323.0*	337.1*	383.3	517*	711.2*	730.7*
094.3	323.1*	350.0*	405	564.2	711.3*	730.8*
096	323.2*	357.1*	420.0*	564.3	711.4*	731.1*
097.1	323.3*	357.2*	421.1*	567.0*	711.5*	731.8*
102.8	323.4*	357.3*	422.0*	569.6	711.6*	737.4*
196	323.6*	357.4*	425.6*	573.1*	711.7*	768.0
197	323.7*	358.1*	425.7*	573.2*	711.8*	768.1
198	330.2*	359.5*	425.8*	576.0	712.0*	774.0*
244.0	330.3*	359.6*	429.4*	579.2	712.1*	777.0*
251.3	331.5*	362.0*	441.7*	579.3	712.2*	7958
294.1	331.6*	370.1*	447.7*	595.4*	712.3*	(00-) ⁹⁹

Codes Not Valid for Multiple Cause

009.1	323.1*	357.1*	420.0*	484.7*	711.4*	713.7*
009.3	323.2*	357.2*	421.1*	484.8*	711.5*	713.8*
294.1	323.3*	357.3*	422.0*	516.1*	711.6*	730.4*
320.4*	323.4*	357.4*	425.6*	517.0*	711.7*	730.5*
320.5*	323.6*	358.1*	425.7*	517.1*	711.8*	730.6*
320.7*	323.7*	359.5*	425.8*	517.2*	712.0*	730.7*
321.0*	330.2*	359.6*	430	517.8*	712.1*	730.8*
321.1*	330.3*	362.0*	441.7*	567.0*	712.2*	731.1*
321.2*	331.5*	370.1*	447.7*	570	712.3*	731.8*
321.3*	331.6*	373.4*	456.2*	573.1*	713.0*	737.4*
321.4*	331.7*	373.5*	484.0*	573.2*	713.1*	768.0
321.5*	334.4*	373.6*	484.1*	595.4*	713.2*	768.1
321.6*	336.2*	376.2*	484.2*	601.4*	713.3*	774.0*
321.7*	336.3*	405.0	484.3*	628.1*	713.4*	777.0*
321.8*	337.1*	405.1	484.4*	711.1*	713.5*	(04
323.0*	350.0*	405.9	484.5*	711.2*	713.6*	)46
			484.6*	711.3*		

TABLE F - ICD-9 CODES NOT VALID FOR UNDERLYING AND/OR MULTIPLE CAUSE CLASSIFICATION - Continued

The following codes from Chapter XVII are also invalid at the four-digit level for multiple cause classification:

(00-(03, (05-)04,)10-)39,)50-)57

- NOTE: (1) An asterisk indicates that the code is a manifestation code in the ICD-9.
- (2) Presence of a three-digit code means that if fourth digits are contained in the ICD-9, they are also invalid for the indicated application.

TABLE G

AGE/CAUSE, SEX/CAUSE
 CONSISTENCY EDITS FOR ICD-9 CODES VALID FOR BOTH
 MULTIPLE AND UNDERLYING CAUSE-OF-DEATH CLASSIFICATION

ICD-9 CODE	AGE/SEX LIMITATION	0 - CONDITIONAL 1 - ABSOLUTE 2 - NOT APPLICABLE	
		AGE	SEX
016.2	Male	2	1
016.3	Male	2	1
016.4	Female	2	1
037	28 days and over	1	2
038	28 days and over	1	2
056	28 days and over	0	2
072.0	Male	2	1
090.5	2 years and over	0	2
090.7	2 years and over	0	2
097.0	2 years and over	0	2
097.9	2 years and over	0	2
112.0	28 days and over	1	2
112.1	Female, 28 days and over	1	1
112.2	28 days and over	1	2
112.3	28 days and over	1	2
112.4	28 days and over	1	2
112.5	28 days and over	1	2
112.8	28 days and over	1	2
112.9	28 days and over	1	2
137	1 year and over	0	2
138	1 year and over	0	2
139.0	1 year and over	0	2
139.1	1 year and over	0	2
139.8	1 year and over	0	2

TABLE G - AGE/CAUSE, SEX/CAUSE CONSISTENCY EDITS FOR ICD-9 CODES VALID FOR BOTH MULTIPLE AND UNDERLYING CAUSE-OF-DEATH CLASSIFICATION - Continued

ICD-9 CODE	AGE/SEX LIMITATION	0 - CONDITIONAL 1 - ABSOLUTE 2 - NOT APPLICABLE	
		AGE	SEX
174	Female	2	1
175	Male	2	1
179	Female	2	1
180	Female	2	1
181	Female	2	1
182	Female	2	1
183	Female	2	1
184	Female	2	1
185	Male	2	1
186	Male	2	1
187	Male	2	1
218	Female	2	1
219	Female	2	1
220	Female	2	1
221	Female	2	1
222	Male	2	1
233.1	Female	2	1
233.2	Female	2	1
233.3	Female	2	1
233.4	Male	2	1
233.5	Male	2	1
233.6	Male	2	1
236.0	Female	2	1
236.1	Female	2	1
236.2	Female	2	1
236.3	Female	2	1
236.4	Male	2	1

TABLE G - AGE/CAUSE, SEX/CAUSE CONSISTENCY EDITS FOR ICD-9 CODES VALID FOR BOTH MULTIPLE AND UNDERLYING CAUSE-OF-DEATH CLASSIFICATION - Continued

ICD-9 CODE	AGE/SEX LIMITATION	0 - CONDITIONAL	
		AGE	SEX
236.5	Male	2	1
236.6	Male	2	1
242	28 days and over	1	2
250	28 days and over	1	2
251.2	28 days and over	1	2
252.1	28 days and over	1	2
256	Female	2	1
257	Male	2	1
269.0	28 days and over	1	2
275.2	28 days and over	1	2
286.0	Male	2	0
286.1	Male	2	0
289.0	28 days and over	1	2
290.0	65 years and over	0	2
290.1	40 years and over	0	2
290.2	65 years and over	0	2
290.3	65 years and over	0	2
290.4	20 years and over	0	2
292.0	28 days and over	1	2
326	1 year and over	0	2
358.0	28 days and over	1	2
431	28 days and over	1	2
432	28 days and over	1	2
456.4	Male	2	1
456.6	Female	2	1
459.0	28 days and over	1	2
492	28 days and over	1	2

TABLE G - AGE/CAUSE, SEX/CAUSE CONSISTENCY EDITS FOR ICD-9 CODES VALID FOR BOTH MULTIPLE AND UNDERLYING CAUSE-OF-DEATH CLASSIFICATION - Continued

ICD-9 CODE	AGE/SEX LIMITATION	0 - CONDITIONAL	
		AGE	SEX
518.0	28 days and over	1	2
518.1	28 days and over	1	2
537.0	1 year and over	1	2
578	28 days and over	1	2
599.0	28 days and over	1	2
600	Male	2	1
601	Male	2	1
602	Male	2	1
603	Male	2	1
604	Male	2	1
605	Male	2	1
606	Male	2	1
607	Male	2	1
608	Male	2	1
611.0	28 days and over	1	2
611.5	Female	2	1
611.6	Female	2	1
614	Female	2	1
615	Female	2	1
616	Female	2	1
617	Female	2	1
618	Female	2	1
619	Female	2	1
620	Female	2	1
621	Female	2	1
622	Female	2	1
623	Female	2	1

TABLE G - AGE/CAUSE, SEX/CAUSE CONSISTENCY EDITS FOR ICD-9 CODES VALID FOR BOTH MULTIPLE AND UNDERLYING CAUSE-OF-DEATH CLASSIFICATION - Continued

ICD-9 CODE	AGE/SEX LIMITATION	0 - CONDITIONAL	
		AGE	SEX
		1 - ABSOLUTE	
		2 - NOT APPLICABLE	
624	Female	2	1
625	Female	2	1
626	Female	2	1
627	Female	2	1
628	Female	2	1
629	Female	2	1
630	Female, 10-54 years	1	1
631	Female, 10-54 years	1	1
632	Female, 10-54 years	1	1
633	Female, 10-54 years	1	1
634	Female, 10-54 years	1	1
635	Female, 10-54 years	1	1
636	Female, 10-54 years	1	1
637	Female, 10-54 years	1	1
638	Female, 10-54 years	1	1
640	Female, 10-54 years	1	1
641	Female, 10-54 years	1	1
642	Female, 10-54 years	1	1
643	Female, 10-54 years	1	1
644	Female, 10-54 years	1	1
645	Female, 10-54 years	1	1
646	Female, 10-54 years	1	1
647	Female, 10-54 years	1	1
648	Female, 10-54 years	1	1
650	Female, 10-54 years	1	1
651	Female, 10-54 years	1	1
652	Female, 10-54 years	1	1

TABLE G - AGE/CAUSE, SEX/CAUSE CONSISTENCY EDITS FOR ICD-9 CODES VALID FOR BOTH MULTIPLE AND UNDERLYING CAUSE-OF-DEATH CLASSIFICATION - Continued

ICD-9 CODE	AGE/SEX LIMITATION	0 - CONDITIONAL 1 - ABSOLUTE 2 - NOT APPLICABLE	
		AGE	SEX
653	Female, 10-54 years	1	1
654	Female, 10-54 years	1	1
655	Female, 10-54 years	1	1
656	Female, 10-54 years	1	1
657	Female, 10-54 years	1	1
658	Female, 10-54 years	1	1
659	Female, 10-54 years	1	1
660	Female, 10-54 years	1	1
661	Female, 10-54 years	1	1
662	Female, 10-54 years	1	1
663	Female, 10-54 years	1	1
664	Female, 10-54 years	1	1
665	Female, 10-54 years	1	1
666	Female, 10-54 years	1	1
667	Female, 10-54 years	1	1
668	Female, 10-54 years	1	1
669	Female, 10-54 years	1	1
670	Female, 10-54 years	1	1
671	Female, 10-54 years	1	1
672	Female, 10-54 years	1	1
673	Female, 10-54 years	1	1
674	Female, 10-54 years	1	1
675	Female, 10-54 years	1	1
676	Female, 10-54 years	1	1
695.0	28 days and over	1	2
695.9	28 days and over	1	2
752.0	Female	2	1

TABLE G - AGE/CAUSE, SEX/CAUSE CONSISTENCY EDITS FOR ICD-9 CODES VALID FOR BOTH MULTIPLE AND UNDERLYING CAUSE-OF-DEATH CLASSIFICATION - Continued

ICD-9 CODE	AGE/SEX LIMITATION	0 - CONDITIONAL 1 - ABSOLUTE 2 - NOT APPLICABLE	
		AGE	SEX
752.1	Female	2	1
752.2	Female	2	1
752.3	Female	2	1
752.4	Female	2	1
752.5	Male	2	1
752.6	Male	2	1
758.7	Male	2	1
760	Under 1 year	0	2
761	Under 1 year	0	2
762	Under 1 year	0	2
763	Under 1 year	0	2
764	Under 1 year	0	2
765.0	Under 1 year	0	2
766.0	Under 1 year	0	2
766.1	Under 1 year	0	2
766.2	Under 1 year	0	2
767.0	Under 28 days	0	2
767.1	Under 1 year	0	2
767.2	Under 1 year	0	2
767.3	Under 1 year	0	2
767.4	Under 1 year	0	2
767.5	Under 1 year	0	2
767.6	Under 1 year	0	2
767.7	Under 1 year	0	2
767.8	Under 1 year	0	2
767.9	Under 1 year	0	2
768.2	Under 1 year	0	2

TABLE G - AGE/CAUSE, SEX/CAUSE CONSISTENCY EDITS FOR ICD-9 CODES VALID FOR BOTH MULTIPLE AND UNDERLYING CAUSE-OF-DEATH CLASSIFICATION - Continued

ICD-9 CODE	AGE/SEX LIMITATION	0 - CONDITIONAL	
		AGE	SEX
768.3	Under 1 year	0	2
768.4	Under 1 year	0	2
768.5	Under 1 year	0	2
768.6	Under 1 year	0	2
768.9	Under 1 year	0	2
769	Under 1 year	0	2
770.0	Under 1 year	0	2
770.1	Under 1 year	0	2
770.2	Under 1 year	0	2
770.3	Under 1 year	0	2
770.4	Under 1 year	0	2
770.5	Under 1 year	0	2
770.6	Under 1 year	0	2
770.7	Under 1 year	0	2
770.8	Under 1 year	0	2
770.9	Under 1 year	0	2
771	Under 1 year	0	2
772	Under 28 days	0	2
773	Under 1 year	0	2
774.1	Under 1 year	0	2
774.2	Under 1 year	0	2
774.3	Under 1 year	0	2
774.4	Under 1 year	0	2
774.5	Under 1 year	0	2
774.6	Under 1 year	0	2
774.7	Under 1 year	0	2
775.0	Under 1 year	0	2

TABLE G - AGE/CAUSE, SEX/CAUSE CONSISTENCY EDITS FOR ICD-9 CODES VALID FOR BOTH MULTIPLE AND UNDERLYING CAUSE-OF-DEATH CLASSIFICATION - Continued

ICD-9 CODE	AGE/SEX LIMITATION	0 - CONDITIONAL 1 - ABSOLUTE 2 - NOT APPLICABLE	
		AGE	SEX
775.1	Under 1 year	0	2
775.2	Under 1 year	0	2
775.3	Under 1 year	0	2
775.4	Under 1 year	0	2
775.5	Under 1 year	0	2
775.6	Under 1 year	0	2
775.7	Under 1 year	0	2
775.8	Under 1 year	0	2
775.9	Under 1 year	0	2
776.0	Under 1 year	0	2
776.1	Under 1 year	0	2
776.2	Under 1 year	0	2
776.3	Under 1 year	0	2
776.4	Under 1 year	0	2
776.5	Under 1 year	0	2
776.6	Under 1 year	0	2
776.7	Under 1 year	0	2
776.8	Under 1 year	0	2
776.9	Under 1 year	0	2
777.1	Under 1 year	0	2
777.2	Under 1 year	0	2
777.3	Under 1 year	0	2
777.4	Under 1 year	0	2
777.5	Under 1 year	0	2
777.6	Under 1 year	0	2
777.8	Under 1 year	0	2
777.9	Under 1 year	0	2

TABLE G - AGE/CAUSE, SEX/CAUSE CONSISTENCY EDITS FOR ICD-9 CODES VALID FOR BOTH MULTIPLE AND UNDERLYING CAUSE-OF-DEATH CLASSIFICATION - Continued

ICD-9 CODE	AGE/SEX LIMITATION	0 - CONDITIONAL	
		AGE	SEX
778.0	Under 1 year	0	2
778.1	Under 1 year	0	2
778.2	Under 1 year	0	2
778.3	Under 1 year	0	2
778.4	Under 1 year	0	2
778.5	Under 1 year	0	2
778.6	Male, under 1 year	0	1
778.7	Under 1 year	0	2
778.8	Under 1 year	0	2
778.9	Under 1 year	0	2
779.0	Under 1 year	0	2
779.1	Under 1 year	0	2
779.2	Under 1 year	0	2
779.3	Under 1 year	0	2
779.4	Under 1 year	0	2
779.5	Under 1 year	0	2
779.6	Under 1 year	1	2
779.8	Under 1 year	0	2
779.9	Under 1 year	0	2
780.0	28 days and over	1	2
780.3	28 days and over	1	2
782.3	28 days and over	1	2
782.4	28 days and over	1	2
782.5	28 days and over	1	2
782.7	28 days and over	1	2
783.3	28 days and over	1	2
786.3	28 days and over	1	2

TABLE G - AGE/CAUSE, SEX/CAUSE CONSISTENCY EDITS FOR ICD-9 CODES VALID FOR BOTH MULTIPLE AND UNDERLYING CAUSE-OF-DEATH CLASSIFICATION - Continued

ICD-9 CODE	AGE/SEX LIMITATION	0 - CONDITIONAL	
		AGE	SEX
787.0	28 days and over	1	2
792.2	Male	2	1
792.3	Female	2	1
795.0	Female	2	1
797	65 years and over	0	2
798.0	Under 1 year	1	2
798.1	1 year and over	1	2
799.0	28 days and over	1	2
799.1	28 days and over	1	2
E950	5 years and over	1	2
E951	5 years and over	1	2
E952	5 years and over	1	2
E953	5 years and over	1	2
E954	5 years and over	1	2
E955	5 years and over	1	2
E956	5 years and over	1	2
E957	5 years and over	1	2
E958	5 years and over	1	2
E959	5 years and over	1	2
E967	Under 18 years	1	2
E969	1 year and over	0	2
E977	1 year and over	0	2
E989	1 year and over	0	2
E999	1 year and over	0	2

TABLE H

AGE/CAUSE, SEX/CAUSE
 CONSISTENCY EDITS FOR ICD-9 CODES,
 VALID FOR MULTIPLE CAUSE-OF-DEATH CLASSIFICATION ONLY

ICD-9 CODE	AGE/SEX LIMITATION	0 - CONDITIONAL	
		AGE	SEX
1986	Female	2	1
4570	Female, 12 years and over	0	0
6390	Female, 10-54 years	1	1
6391	Female, 10-54 years	1	1
6392	Female, 10-54 years	1	1
6393	Female, 10-54 years	1	1
6394	Female, 10-54 years	1	1
6395	Female, 10-54 years	1	1
6396	Female, 10-54 years	1	1
6398	Female, 10-54 years	1	1
6399	Female, 10-54 years	1	1
)474	Female	2	1
)622	Female	2	1
)933	12 years and over	0	2
)955	Under 18 years	1	2

TABLE I

INFREQUENT AND RARE CAUSE-OF-DEATH EDITS FOR UNDERLYING
AND MULTIPLE CAUSE-OF-DEATH CLASSIFICATION

001	Cholera	081	Other typhus
002	Typhoid and paratyphoid fevers	082.1	Boutonneuse fever
005.1	Botulism	082.2	North Asian tick fever
007.0-.1	Other protozoal intestinal	082.3	Queensland tick typhus
007.3-.9	diseases excluding coccidiosis	082.8	Other tick-borne rickettsioses
020	Plague	082.9	Unspecified tick-borne rickettsioses
021	Tularaemia	083	Other rickettsioses
022	Anthrax	084	Malaria
023	Brucellosis	085	Leishmaniasis
024	Glanders	086	Trypanosomiasis
025	Melioidosis	087	Relapsing fever
026	Rat-bite fever	088	Other arthropod-borne diseases
030	Leprosy	100	Leptospirosis
032	Diphtheria	102	Yaws
033	Whooping cough	103	Pinta
037	Tetanus	104	Other spirochaetal infection
045	Acute poliomyelitis	120	Schistosomiasis
050	Smallpox	121	Other trematode infections
051	Cowpox and paravaccinia	122	Echinococcosis
055	Measles	123	Other cestode infection
056	Rubella	124	Trichinosis
060	Yellow fever	125	Filarial infection and dracontiasis
061	Dengue	323.5	Encephalitis following immunization procedures
063	Tick-borne viral encephalitis	771.0	Congenital rubella
064	Viral encephalitis transmitted by other and unspecified arthropods	771.3	Tetanus neonatorum
065	Arthropod-borne hemorrhagic fever	E926	Exposure to radiation
066.0	Phlebotomus fever	)78	Poisoning by bacterial vaccines
066.2	Venezuelan equine fever	)79.0	Smallpox vaccine
066.3	Other mosquito-borne fever	)79.1	Rabies vaccine
071	Rabies	)79.2	Typhus vaccine
072	Mumps	)79.3	Yellow fever vaccine
073	Ornithosis	)79.4	Measles vaccine
074.1	Epidemic pleurodynia	)79.5	Poliomyelitis vaccine
080	Louse-borne (epidemic) typhus	)79.6	Other and unspecified viral and rickettsial vaccines
		)79.7	Mixed viral-rickettsial and bacterial vaccines, except combinations with a pertussis component

TABLE J

PLACE-OF-OCCURRENCE EDITS FOR NON-TRANSPORT ACCIDENTS,
ICD-9 E850-E869, E880-E928

ICD-9 Code	Place of Occurrence Codes Allowed	Allocate Invalid Codes To:
E884.0	0,1,3,4,6,7,8,9	9
E890.0	0,4,8	0
E890.1	0,4,8	0
E890.2	0,4,8	0
E890.3	0,4,8	0
E890.8	0,4,8	0
E890.9	0,4,8	0
E891.0	0,1,2,3,4,6,7,8,9	9
E891.1	0,1,2,3,4,6,7,8,9	9
E891.2	0,1,2,3,4,6,7,8,9	9
E891.3	0,1,2,3,4,6,7,8,9	9
E891.8	0,1,2,3,4,6,7,8,9	9
E891.9	0,1,2,3,4,6,7,8,9	9
E895	0,4,8	0
E896	0,1,2,3,4,6,7,8,9	9
E902.1	8	8
E902.2	8	8
E910.0	0,1,2,3,4,8,9	9
E910.1	0,1,2,3,4,6,7,8,9	9
E910.2	0,1,2,3,4,6,7,8,9	9
E910.3	0,1,2,3,4,6,7,8,9	9
E910.4	0,1,3,4,6,7,8,9	9
E913.0	0,1,4,6,7,8,9	9
E919.2	0,3,4,5,6,7,8,9	9
E925.0	0	0
E925.1	3	3
E925.8	0,1,4,5,6,7,8,9	9
E925.9	9	9
E926.0	3,4,6,8,9	9
E928.0	3,8,9	9

Note: For non-transport accidents other than those specified above, place of occurrence codes 0 through 9 are allowed. Invalid codes will be allocated to code 9.

TABLE K

CURRENT MORTALITY SAMPLE COMPUTER EDITS

1. State of Death is edited for valid code range.
Invalid codes are allocated from the last preceding record containing a valid State code.

2. Month of Death is edited for valid code range.
An invalid code is assigned to the month code from the preceding record containing a valid month code.

3. Year of Death is edited against the current and previous years' codes.
Invalid codes are assigned the current year's code.

4. Sex of Decedent is edited for valid code range.
If invalid, the sex code from the previous record is assigned.

5. Race of Decedent is edited for valid code range.
Invalid codes are assigned to White.

6. Age of Decedent is edited for valid code range.
Invalid codes are assigned to the "not classifiable" code.

TABLE L

AGE/CAUSE, SEX/CAUSE
CONSISTENCY EDITS FOR THE CURRENT MORTALITY SAMPLE

72 Cause List Categories

Limitations

600

Male

630-638, 640-676

Female, 10-54 years

E950-E959

5 years and over