The Matched Multiple Birth File

Developed by Joyce A. Martin, M.P.H.; Sally A. Curtin, M.A.; Margaret L. Saulnier, M.A.; and Jaleh Mousavi, B.A.

Population of multiple birth/fetal death records

This data set, "The Matched Multiple Birth File," was developed to allow for analysis of characteristics of sets of births and fetal deaths in multiple deliveries. Such analysis is not possible using the traditional NCHS Live Birth and Fetal Death Files because these files contain individual records of births and deaths in multiple deliveries, but do not identify set members. Thus, characteristics specific to the multiple set (e.g., gender combination of the set, outcome of the set, birthweight differences among set mates) are not available.

To match the members of multiple deliveries we first identified all records reported as twins and triplets and other higher order multiple births in the restricted-use U.S. Live Birth and Fetal Death files for 1995-97. All live birth and fetal death records with reported pluralities of 2 or greater, indicating that the event occurred in a multiple delivery, were selected for matching. (Records with a "not stated" plurality are imputed with a plurality of "1" in these files and were, therefore, not included.) For confidentiality reasons, only births and fetal deaths in twin and triplet deliveries are included on the public-release file.

Note: Fetal deaths of less than 20 completed weeks of gestation which are part of a matched set are

included in this file (see tables 1 and 2). However, as these events are reported by only a small number

of reporting areas and are considered less completely reported than fetal deaths of longer gestations,

all statistics presented in the following discussion exclude these events and considerable caution should

be used in analysis of them.

Matching algorithm

We developed an algorithm consisting of variables from live birth and fetal death records to

match members of twin and triplet sets. The most obvious variables on which to match, the name and

address of the mother, are not collected by NCHS due to confidentiality considerations.   The algorithm

used in the first stage of matching was based on variables we considered the most uniquely identifying

to the pregnancy and which were reported with a reasonable amount of completeness and accuracy:

plurality, State and county of occurrence of delivery, mother's date of birth, and the date of delivery

(within 2 sequential days).   We then identified live birth/fetal death records which had identical values

for these five variables. If the number of records with identical information equaled the reported

plurality (e.g., three records reported as triplets) these records were considered members of the same

twin or triplet set and assigned a unique set identification number. We also identified instances where

the number of records with identical data exceeded the reported plurality of the records. These

records were later visually reviewed by the authors and matched where appropriate.   Approximately

93 percent of all records were matched in the first stage. All other records were considered unmatched

and included in the next stage of the process.

Stage two included all of the unmatched records from stage one except where the number of records with identical data exceeded the reported plurality of the records (see above). In this stage, we added the date of the reported last menstrual period (LMP) and allowed a one digit difference in the mother's date of birth, or the in the date of delivery to allow for obvious miscoding of these items (e.g. for mother's date of birth a one digit difference would be 04/19/64 for one record and 04/19/44 for the other). Records with not stated mother's date of birth were also matched at this stage if data for the other items were identical (1 digit miscodes were not allowed).   Stage two resulted in approximately 5 percent of additional records matched, for a cumulative total of over 98 percent of all records matched.

In stage three of the matching process we developed several more complicated algorithms which included additional items from the birth/fetal death record (e.g.:   total number of prenatal visits, weight gain during pregnancy, education of the mother). This cycle also allowed for slightly more leniency in the matching of records with obvious miscodes.   Most of the stage three process was done by hand, that is, unmatched records were visually reviewed to identify matches. (A detailed description of this final process is available upon request).   Following this, the final stage of the matching process, the cumulative total of twin and triplet records matched was 98.8 percent.

NOTE: Although the proportion of unmatched records is very low for this file, it is important to note that there are important differences in characteristics between matched and unmatched records. For example, unmatched records are more likely to include infant (11.7 percent) and fetal deaths (18.7 percent) than matched records (3.1 and 1.9 percent respectively).

Verification of algorithm

To verify our algorithm we surveyed State vital statistics offices and were able to identify only one, Missouri, which maintained a State database of matched sets of multiple records. We then compared our results for the State of Missouri to that of the Missouri office for data year 1995. Matches on the Missouri file were based primarily on the mother's name and address, which would tend to make them highly reliable and thus we considered the Missouri file the "gold standard". In comparing the two files, we found no "false positives"; that is, we did not inadvertently match any records which were not truly members of sets of multiples births. We found only 6 "false negatives"; that is, records that were unmatched on our file but were matched on the Missouri file. These records comprised only .05% of the more than 2,000 Missouri records on our file. The reason our algorithm failed to match these records was due to poor data quality of the items in our algorithm. For example, the date of delivery for some records was miscoded to such an extent that it did not meet our matching criteria and was not considered a match. Missouri was able to match the records because they had the more identifying information -- the mother's name and address. While not perfect, we felt that the comparison with the Missouri file validated our algorithm as a reliable method for identifying sets of multiples births.

Inclusion of infant deaths

In order to analyze multiple delivery sets for the full perinatal period, information on infant deaths are included on the Matched Multiple Birth File. The Linked Live Birth/Infant Death Cohort

Data Sets for 1995-97 were used to identify infant deaths of up to one year of age which correspond

to the live twin and triplet birth records. Information pertaining to the death (e.g. date of death, cause

of death) was appended to the end of the appropriate live birth record. Thus, the final file contains all

live births and fetal deaths in twin and triplet deliveries, plus infant deaths.

Imputation of plurality

Plurality (of records originally coded as "2" or higher) was imputed (changed) for a small

number of records (41), or .02 percent of all records on the Matched Multiple Birth File. The

imputation was performed to correct what appeared to be obvious miscoding of plurality. In general,

plurality was imputed where information for records matched but 1 or more of the potential set

member records indicated a different plurality. For example, if three live birth records matched and

two of these records indicated a plurality of 3 but the remaining record had a plurality of 2, then the

plurality for the later record was changed to a 3. Plurality was imputed for all members of a set only

where information on all records matched and certificate numbers were perfectly consecutive (for

example, if three live birth records with pluralities of "2" matched and certificate numbers were

consecutive, the plurality for all three records was changed to "3." All of the records in which plurality

was imputed are flagged on the data set.

Additional data fields

A "Birth ID" field was created to indicate whether a record was a live birth which survived the

first year of life, a live birth which did not survive the first year, or a fetal death. Records that were not

matched were retained on the file to allow comparison of their data with those of matched records. A "set completeness" flag was generated to distinguish between records that were members of complete sets (2 of 2 twins or 3 of 3 triplets), records that were members of incomplete sets (2 of 3 triplets), or records that were unmatched (1 of 2 twins, or 1 of 3 triplets).

A "set birth order" field was developed to capture the order of births born within the twin or triplet set, an item not included in the traditional live birth data set. The set birth order field is derived from the total birth order (live births and fetal deaths). Where the total birth order of all records is stated, the set birth order follows the chronology of the total birth order except that the set birth order for the first born of the set is coded as "1", the second born as "2", and the third born (for triplets) as "3". For example, if the total birth order for one record of a twin set is "5" and for the other record, "6", the set birth order for the first record is "1" and the second record is "2".

The set birth order was imputed where possible--for twins, one record had a total birth order of 1 and the total birth order of the second record was "not stated". In this case we know that the first record was the firstborn of the set because the total birth order was "1". Thus, the set order of the record with the "not stated" total birth order would be imputed to "2". Similarly, for triplets, if only one record had a "not stated" total birth order and the other two records were stated and one of these records had a total birth order of "1", then the set birth order of the remaining member could be imputed.

A limitation of this derived variable is the high percent not stated (12.1 percent). In general, there is confusion in reporting total birth order for plural sets which often results in inconsistent birth orders between set members (e.g. both set members have the same total birth order). In situations

where the total birth order is inconsistent between set members, the set birth order was coded as "not

stated".

Acknowledgments

1995-97 Detail Matched Multiple Birth File Record

Item Location	Field Name	Item and Code Outline

1   [BIRTHID] BIRTH ID

        1   ... Live multiple birth/survived first year

        2   ... Live multiple birth/did not survive first year

        3   ... Fetal death

2-5   Reserved Positions

6   [TABFLAG] TABULATION INCLUSION FLAG

The majority of fetal death tables published by NCHS/DVS include only those fetal deaths with stated or presumed gestation of 20 weeks or more, see the Technical Appendix. This position is used to indicate which records to exclude in these tables.

  Blank ... Live Births
     1   ... Fetal deaths under 20 weeks (excluded)
     2   ... Fetal deaths 20 weeks or more (included)

7   [PLURALITY]

        2   ... Twin
        3   ... Triplet

8-13   [SETID]   SET IDENTIFICATION NUMBER

```
        000001   ... Unique number assigned to each set of
          -              twins and triplets
        999999
```

14   [SEQNO]   SEQUENCE NUMBER

```
        1 - 3    ...  The sequence number of the birth
                        within the set   (For complete sets only).
```

15-20   Reserved positions

21   [PLUIMP]   PLURALITY IMPUTATION FLAG

```
        0        ... Plurality is not imputed

        1        ... Plurality is imputed
```

22   [FLGCOMP] SET COMPLETENESS FLAG

```
        0        ... Record is member of a complete set

        1        ... Record is member of an incomplete set (not applicable to twins)

        2        ... Record is unmatched
```

23   [FLGRECS] NUMBER OF RECORDS IN THE SET

```
        This field allows the correct number of records
        in the set to be read for processing.  This field
        must be used when programming incomplete sets
        or unmatched records.

        2-3     ...Value equals plurality (for complete sets).
        1-2     ...Value equals the number of records in the set (for incomplete sets)
        1       ...Value equals 1 (for single unmatched
                   records).
```

24   [SETORDER] SET BIRTH ORDER
```
        0    ... Single unmatched births
        1-3 ... Order of the fetuses deliveried within the set
```

9   ... Not stated

25   [RECTYPE]   RECORD TYPE

      1   ... RESIDENT: State and county of
               occurrence and residence are the
               same.
      2   ... NONRESIDENT: State and/or county
               of occurrence and residence are
               different.

26   [RESTATUS] RESIDENT STATUS

      1   ... RESIDENT:
               State and county of occurrence
               and residence are the same.
      2   ... INTRASTATE NONRESIDENT:
               State of occurrence and residence
               are the same, but county is
               different.
      3   ... INTERSTATE NONRESIDENT:
               State of occurrence and residence
               are different, but both are in
               the U.S.
      4   ... FOREIGN RESIDENT:
               State of occurrence is one of the
               50 States or the District of
               Columbia, but the residence of
               the mother is outside of the U.S.

27   [PLDEL]   PLACE OR FACILITY OF BIRTH

      1   ... Hospital
      2   ... Freestanding Birthing Center
      3   ... Clinic or Doctor's Office
      4   ... A Residence
      5   ... Other
      9   ... Unknown or Not Stated

28   [BIRATTND] ATTENDANT AT BIRTH

1   ... Doctor of Medicine (M.D.)
2   ... Doctor of Osteopathy (D.O.)
3   ... Certified Nurse Midwife (C.N.M.)
4   ... Other Midwife
5   ... Other
9   ... Unknown or Not Stated

29-38   Reserved Positions

39   [MAGERFLG] REPORTED AGE OF MOTHER USED FLAG

        This position is flagged whenever the mother's
        reported age in years is used. The reported age
        is used, if valid, when age derived from date
        of birth is not available or when it is outside
        the 10-49 code range.

        Blank   ... Reported age is not used
        1   ... Reported age is used

40   [MAGEIMP]   AGE OF MOTHER IMPUTATION FLAG

        Blank   ... Age is not imputed
        1   ... Age is imputed

41-42   [DMAGE]   AGE OF MOTHER

        This item is: a) computed using dates of birth of
        mother and of child when available and if valid;
        b) reported and valid; or c) imputed. This is the
        age item used in NCHS publications.

        15   ... Under 15 years
        16-49 ... 16-49 years, Age in single years
        50   ... 50 years and greater (births to women of this age group available for
                 1997 only)

43-45   Reserved positions

46   [ORRACEM]   HISPANIC ORIGIN AND RACE OF MOTHER RECODE

Origin is not reported by all areas for fetal
deaths. See reporting flags.

1   ... Total Hispanic
2   ... Non-Hispanic White
3   ....Non - Hispanic Black
4   ... Non - Hispanic other races
9   ... Origin unknown or not stated

47   [MRACEIMP] RACE OF MOTHER IMPUTATION FLAG

Blank   ... Race is not imputed
1   ... Unknown race is imputed
2   ... All other races, formerly code 09,
         is imputed

48-49   [MRACE]   RACE OF MOTHER

01   ... White
02   ... Black
03   ... Other races

50-57   Reserved positions

58-59   [DMEDUC]   EDUCATION OF MOTHER DETAIL

00   ... No formal education

01-08   ... Years of elementary school
09   ... 1 year of high school
10   ... 2 years of high school
11   ... 3 years of high school
12   ... 4 years of high school

13	...	1 year of college
14	...	2 years of college
15	...	3 years of college
16	...	4 years of college
17	...	5 or more years of college
99	...	Not stated

60   [MEDUC6]   EDUCATION OF MOTHER RECODE

1	...	0 - 8 years
2	...	9 - 11 years
3	...	12 years
4	...	13 - 15 years
5	...	16 years and over
6	...	Not stated

61   [DMARIMP]   MARITAL STATUS OF MOTHER IMPUTATION FLAG
          Not applicable to fetal deaths.

Blank	...	Marital Status is not imputed
1	...	Marital Status is imputed

62   [DMAR]   MARITAL STATUS OF MOTHER

1	...	Married
2	...	Unmarried
9	...	Unknown or not stated

63   [MPLBIRR]   PLACE OF BIRTH OF MOTHER RECODE

1	...	Native born
2	...	Foreign born
3	...	Unknown or not stated

64-65   [DMAGERPT] REPORTED AGE OF MOTHER

15	...	Under 15 years
16-49	...	16-49 years, Age in single years
50	...	50 years and greater (births to women of this age group available for 1997 only)
99	...	unknown or not stated

66-67 [DLIVORD] DETAIL LIVE BIRTH ORDER

    Sum of live births now living and now dead plus
    one. If either item is unknown, this item is
    made unknown.
    00-31 ... Number of children born alive to
        mother
    99 ... Unknown

68   [LIVORD9] LIVE BIRTH ORDER RECODE

    1 ... First Child
    2 ... Second Child
    3 ... Third Child
    4 ... Fourth Child
    5 ... Fifth Child
    6 ... Sixth Child
    7 ... Seventh Child
    8 ... Eighth Child and over
    9 ... Unknown or not stated

69-70 [DTOTORD] DETAIL TOTAL BIRTH ORDER
    Sum of live birth order and other terminations.
    If either item is unknown, this item is made
    unknown.
    01-40 ... Total number of live births and
        other terminations.
    99 ... Unknown

71   [TOTORD9] TOTAL BIRTH ORDER RECODE

    1 ... First Child
    2 ... Second Child
    3 ... Third Child
    4 ... Fourth Child
    5 ... Fifth Child
    6 ... Sixth Child
    7 ... Seventh Child
    8 ... Eighth Child and over
    9 ... Unknown or not stated

72-73   [MONPRE]   DETAIL MONTH OF PREGNANCY PRENATAL CARE BEGAN

        00   ... No prenatal care
        01   ... 1st month
        02   ... 2nd month
        03   ... 3rd month
        04   ... 4th month
        05   ... 5th month
        06   ... 6th month
        07   ... 7th month
        08   ... 8th month
        09   ... 9th month
        99   ... Unknown or not stated

74-75   [NPREVIST] TOTAL NUMBER OF PRENATAL VISITS

        00   ... No prenatal visits
        01-48   ... Stated number of visits
        49   ... 49 or more visits
        99   ... Unknown or not stated

76-83   Reserved positions

84   [FAGERFLG] REPORTED AGE OF FATHER USED FLAG

This position is flagged whenever the father's
reported age in years is used. The reported age
is used, if valid, when age derived from date of
birth is not available or when it is less than 10.

85-86   [DFAGE]   AGE OF FATHER

This item is either computed from date of birth
of father and of child or is the reported age.
This is the age item used in NCHS publications.

        19   ...Under 20
        20-59   ...20-59, Age in single years
        60   ...60 years and greater

99   ...Unknown or not stated

87-88   [FRACE]   RACE OF FATHER

          01   ... White
          02   ... Black
          03   ... Other races
          99   ... Unknown or not stated

89-90   [DFAGERPT] REPORTED AGE OF FATHER

          19   ...Under 20
          20-59   ...20-59, Age in single years
          60   ...60 years and greater
          99   ...Unknown or not stated

91   [FRACEIMP] RACE OF FATHER IMPUTATION FLAG

          (Unknown race of father is not imputed. However,
          the all other races code is changed to unknown.)

          Blank   ... Race is not changed
          3   ... All other races, formerly code 09,
                        is changed to code 99

92-99   Reserved positions

100   [GESTESTM] CLINICAL ESTIMATE OF GESTATION USED FLAG

          This position is flagged whenever the clinical
          estimate of gestation is used. It is used when
          gestation could not be computed or when the com-
          puted gestation is outside the 17-47 code range.

          Blank   ... Clinical Estimate is not used
          1   ... Clinical Estimate is used

101   [GESTIMP] GESTATION IMPUTATION FLAG

           Blank   ... Gestation is not imputed
           1   ... Gestation is imputed

102-103   [GESTAT]   GESTATION - DETAIL IN WEEKS

This item is: a) computed using dates of birth
of child and last normal menses; b) imputed from
LMP date; c) the clinical estimate; or d) unknown
when there is insufficient data to impute or no
valid clinical estimate. This is the gestation
item used in NCHS publications.

           17-47   ... 17th through 47th week of gestation
           99   ... Unknown

104   [CSEXIMP] SEX IMPUTATION FLAG

           Blank   ... Sex is not imputed
           1   ... Sex is imputed

105   [CSEX]   SEX

           1   ... Male
           2   ... Female
            99   ... Unknown (fetal deaths of < 20 weeks gestation only)

106-109   [DBIRWT]   BIRTH WEIGHT - DETAIL IN GRAMS

           0227-8165 ... Number of grams
           9999   ... Not stated birth weight

110-111   [BIRWT12] BIRTH WEIGHT RECODE 12

           01   ... 499 grams or less
           02   ... 500 - 999 grams
           03   ... 1000 - 1499 grams
           04   ... 1500 - 1999 grams
           05   ... 2000 - 2499 grams
           06   ... 2500 - 2999 grams

07   ... 3000 - 3499 grams
08   ... 3500 - 3999 grams
09   ... 4000 - 4499 grams
10   ... 4500 - 4999 grams
11   ... 5000 - 8165 grams
12   ... Not stated

112-113   [FMAPS]   FIVE MINUTE APGAR SCORE

Apgar Score is not reported by all areas. See reporting flags.

00-10   ... A score of 0-10
99   ... Unknown or not stated

114   [FMAPSR] FIVE MINUTE APGAR SCORE RECODE

Apgar score is not reported by all areas. See reporting flags

1   ... A score of 0-3
2   ... A score of 4-6
3   ... A score of 7-8
4   ... A score of 9-10
5   ... Not stated

115   [CLINGEST] CLINICAL ESTIMATE OF GESTATION

Clinical estimate is not reported by all areas.
See reporting flags.

17-47   ... Estimated gestation in weeks
99   ... Unknown or not stated

116   [DELMETH] METHOD OF DELIVERY

Each method is assigned a separate position, and the code structure for each method (position) is:

1   ... The method was used
2   ... The method was not used

| 8 | ... Method not on certificate |
| 9 | ... Method unknown or not stated |

117   [VAGINAL]   VAGINAL

118   [VBAC]   VAGINAL BIRTH AFTER PREVIOUS C-SECTION

119   [PRIMAC]   PRIMARY C -SECTION

120   [REPEAC]   REPEAT C -SECTION

121   [FORCEP]   FORCEPS

122   [VACUUM]   VACUUM

123   [HYSTER]   HYSTEROTOMY/HYSTERECTOMY
                  (fetal deaths only)

124   [DELMETH6] METHOD OF DELIVERY RECODE

1	... Vaginal (excludes vaginal after previous C-section)
2	... Vaginal birth after previous C-section
3	... Primary C -section
4	... Repeat C -section
5	... Not stated
6	... Hysterotomy/Hysterectomy (fetal deaths only)

125-141   [MEDRISK] MEDICAL RISK FACTORS

Each risk factor is assigned a separate position,
and the code structure for each risk factor
(position) is:

1	... Factor reported
2	... Factor not reported
8	... Factor not on certificate
9	... Factor not classifiable

125   [ANEMIA]   ANEMIA (HCT.<30/HGB.<10)

126   [CARDIAC]   CARDIAC DISEASE

127   [LUNG]   ACUTE OR CHRONIC LUNG DISEASE

128   [DIABETES] DIABETES

129   [HERPES]   GENITAL HERPES

130   [HYDRA]   HYDRAMNIOS/OLIGOHYDRAMNIOS

131   [HEMO]   HEMOGLOBINOPATHY

132   [CHYPER]   HYPERTENSION, CHRONIC

133   [PHYPER]   HYPERTENSION, PREGNANCY-ASSOCIATED

134   [ECLAMP]   ECLAMPSIA

135   [INCERVIX] INCOMPETENT CERVIX

136   [PRE4000]   PREVIOUS INFANT 4000+ GRAMS

137   [PRETERM] PREVIOUS PRETERM OR SMALL-FOR-GESTATIONAL-AGE
                           INFANT
138   [RENAL]   RENAL DISEASE

139   [RH]   RH SENSITIZATION

140   [UTERINE]   UTERINE BLEEDING

141   [OTHERMR] OTHER MEDICAL RISK FACTORS

142-145   [TOBACRSK] TOBACCO RISKS

142   [TOBACCO]   TOBACCO USE DURING PREGNANCY

                1   ... Yes
                2   ... No
                9   ... Unknown or not stated

143-144   [CIGAR]   AVERAGE NUMBER OF CIGARETTES PER DAY

00-97	... As stated	
98	... 98 or more cigarettes per day	
99	... Unknown or not stated	

145 [CIGAR6] AVERAGE NUMBER OF CIGARETTES PER DAY RECODE

0	... Nonsmoker
1	... 1 - 5 cigarettes per day
2	... 6 - 10 cigarettes per day
3	... 11 - 20 cigarettes per day
4	... 21 - 40 cigarettes per day
5	... 41 or more cigarettes per day
6	... Unknown or not stated

146-149 [ALCOHRSK] ALCOHOL

146 [ALCOHOL] ALCOHOL USE DURING PREGNANCY

1	... Yes
2	... No
9	... Unknown or not stated

147-148 [DRINK] AVERAGE NUMBER OF DRINKS PER WEEK

00-97	... As stated
98	... 98 or more drinks per week
99	... Unknown or not stated

149 [DRINK5] AVERAGE NUMBER OF DRINKS PER WEEK RECODE

0	... Non drinker
1	... 1 drink per week
2	... 2 drinks per week
3	... 3 - 4 drinks per week
4	... 5 or more drinks per week
5	... Unknown or not stated

150-152 [WTGANRSK] WEIGHT GAIN DURING PREGNANCY

150-151 [WTGAIN] WEIGHT GAIN

```
00-97    ... Stated number of pounds
98       ... 98 pounds or more
99       ... Unknown or not stated
```

152   [WTGAIN9] WEIGHT GAIN RECODE

```
1        ... Less than 16 pounds
2        ... 16 - 20 pounds
3        ... 21 - 25 pounds
4        ... 26 - 30 pounds
5        ... 31 - 35 pounds
6        ... 36 - 40 pounds
7        ... 41 - 45 pounds
8        ... 46 or more pounds
9        ... Unknown or not stated
```

153-159   [OBSTETRC] OBSTETRIC PROCEDURES

Each procedure is assigned a separate position,
and the code structure for each procedure
(position) is:

```
1        ... Procedure reported
2        ... Procedure not reported
8        ... Procedure not on certificate
9        ... Procedure not classifiable
```

153   [AMNIO]   AMNIOCENTESIS

154   [MONITOR] ELECTRONIC FETAL MONITORING

155   [INDUCT]   INDUCTION OF LABOR

156   [STIMULA]   STIMULATION OF LABOR

157   [TOCOL]   TOCOLYSIS

158   [ULTRAS]   ULTRASOUND

159   [OTHEROB] OTHER OBSTETRIC PROCEDURES

160-175   [LABOR]   COMPLICATIONS OF LABOR AND/OR DELIVERY

Each complication is assigned a separate position,
and the code structure for each complication
(position) is:

1   ... Complication reported
2   ... Complication not reported
8   ... Complication not on certificate
9   ... Complication not classifiable

160   [FEBRILE]   FEBRILE (>100 DEGREES F. OR 38 DEGREES C.)

161   [MECONIUM] MECONIUM, MODERATE/HEAVY

162   [RUPTURE]   PREMATURE RUPTURE OF MEMBRANE (>12 HOURS)

163   [ABRUPTIO]   ABRUPTIO PLACENTA

164   [PREPLACE]   PLACENTA PREVIA

165   [EXCEBLD]   OTHER EXCESSIVE BLEEDING

166   [SEIZURE]   SEIZURES DURING LABOR

167   [PRECIP]   PRECIPITOUS LABOR (<3 HOURS)

168   [PROLONG]   PROLONGED LABOR (>20 HOURS)

169   [DYSFUNC]   DYSFUNCTIONAL LABOR

170   [BREECH]   BREECH/MALPRESENTATION

171   [CEPHALO]   CEPHALOPELVIC DISPROPORTION

172   [CORD]   CORD PROLAPSE

173   [ANESTHE]   ANESTHETIC COMPLICATIONS

174   [DISTRESS]   FETAL DISTRESS

175   [OTHERLB]   OTHER COMPLICATION OF LABOR AND/OR DELIVERY

176-184   [NEWBORN] ABNORMAL CONDITIONS OF THE NEWBORN

          Not applicable to fetal deaths.
          Each condition is assigned a separate position,
          and the code structure for each condition
          (position) is:

          1   ... Condition reported
          2   ... Condition not reported
          8   ... Condition not on certificate
          9   ... Condition not classifiable

176   [NANEMIA]   ANEMIA (HCT.<39/HGB.<13)

177   [INJURY]   BIRTH INJURY

178   [ALCOSYN]   FETAL ALCOHOL SYNDROME

179   [HYALINE]   HYALINE MEMBRANE DISEASE

180   [MECONSYN] MECONIUM ASPIRATION SYNDROME

181   [VENL30]   ASSISTED VENTILATION, LESS THAN 30 MINUTES

182   [VEN30M]   ASSISTED VENTILATION, 30 MINUTES OR MORE

183   [NSEIZ]   SEIZURES

184   [OTHERAB]   OTHER ABNORMAL CONDITIONS OF THE NEWBORN

185-206   [CONGENIT] CONGENITAL ANOMALIES

          Each anomaly is assigned a separate position,
          and the code structure for each anomaly
          (position) is:

          1   ... Anomaly reported
          2   ... Anomaly not reported

8 ... Anomaly not on certificate
9 ... Anomaly not classifiable

185   [ANEN]   ANENCEPHALUS

186   [SPINA]   SPINA BIFIDA/MENINGOCELE

187   [HYDRO]   HYDROCEPHALUS

188   [MICROCE]   MICROCEPHALUS

189   [NERVOUS]   OTHER CENTRAL NERVOUS SYSTEM ANOMALIES

190   [HEART]   HEART MALFORMATIONS

191   [CIRCUL]   OTHER CIRCULATORY/RESPIRATORY ANOMALIES

192   [RECTAL]   RECTAL ATRESIA/STENOSIS

193   [TRACHEO]   TRACHEO - ESOPHAGEAL FISTULA/ESOPHAGEAL ATRESIA

194   [OMPHALO] OMPHALOCELE/GASTROSCHISIS

195   [GASTRO]   OTHER GASTROINTESTINAL ANOMALIES

196   [GENITAL]   MALFORMED GENITALIA

197   [RENALAGE] RENAL AGENESIS

198   [UROGEN]   OTHER UROGENITAL ANOMALIES

199   [CLEFTLP]   CLEFT LIP/PALATE

200   [ADACTYLY] POLYDACTYLY/SYNDACTYLY/ADACTYLY

201   [CLUBFOOT]   CLUB FOOT

202   [HERNIA]   DIAPHRAGMATIC HERNIA

203   [MUSCULO]   OTHER MUSCULOSKELETAL/INTEGUMENTAL ANOMALIES

204   [DOWNS]   DOWN'S SYNDROME

205   [CHROMO]   OTHER CHROMOSOMAL ANOMALIES

206   [OTHERCON] OTHER CONGENITAL ANOMALIES

207-226   [FLRES]   REPORTING FLAGS FOR PLACE OF RESIDENCE

These positions contain flags to indicate whether
or not the specified item is included in the
report of fetal death or live birth certificate of
the State of residence.

The code structure for each flag (position) is:

0   ... The item is not reported.
1   ... The item is reported or partially
              reported.

207   [FLGESTALL]   ALL GESTATIONS REPORTED
               (Applicable only to fetal deaths)
208   [FLGORIGM]   ORIGIN OF MOTHER

209   [FLGORIGF]   ORIGIN OF FATHER

210   [FLGDMARF]   MARITAL STATUS
                    (Applicable only to fetal deaths)

211   [FLGLMP]   DATE OF LAST NORMAL MENSES
                    (Applicable only to fetal deaths)

212   [FLGPNVF]   NUMBER OF PRENATAL VISITS
                    (Applicable only to fetal deaths)

213   [FLGGESTE]   CLINICAL ESTIMATE OF GESTATION

214   [FLGFMAPS]   5 - MINUTE APGAR SCORE

215   [FLGDELMT]   METHOD OF DELIVERY

216   [FLGMEDRS]   MEDICAL RISK FACTORS

217   [FLGTOBUSE] TOBACCO USE

218   [FLGCIGARS] NUMBER OF CIGARETTES
                      (Applicable only to fetal deaths)

219   [FLGALCUSE] ALCOHOL USE

220   [FLGDRINKS]   NUMBER OF DRINKS
                      (Applicable only to fetal deaths)

221   [FLGWTGN]   WEIGHT GAIN

222   [FLGOBSTRC]   OBSTETRIC PROCEDURES

223   [FLGLABOR]   COMPLICATIONS OF LABOR AND/OR DELIVERY

224   [FLGABNML]   ABNORMAL CONDITIONS OF NEWBORN

225   [FLGCONG]   CONGENITAL ANOMALIES

226   [FLGEDUC]   EDUCATION OF MOTHER (BASED ON MSA)

227   Reserved Position

Locations 1 - 227 contain data from the fetal death records, the infant
death records, and multiple live births from the natality file. The
remaining fields on the record are from the infant death record only.

228-230   [AGED]   AGE AT DEATH IN DAYS

                 The generated age at death in days is caluclated
                 from the date of death on the death certificate
                 minus the date of birth on the birth certificate
                 unless the reported age of death is less than
                 2 days, then the reported age is used. If the
                 exact date of birth and/or death is unknown, the
                 age is imputed.

                 000-364   ... Number of days

231   [AGER5]   INFANT AGE RECODE 5

      1   ... Under 1 hour
      2   ... 1-23 hours
      3   ... 1-6 days
      4   ... 7-27 days (late neonatal)
      5   ... 28 days and over(postneonatal)

232   [ACCIDPL]   PLACE OF ACCIDENT FOR CAUSES E850-E869 AND
      E880-E928

      Blank   ... Causes other than E850-E869 and
              E880-E928

      0   ... Home
      1   ... Farm
      2   ... Mine and quarry
      3   ... Industrial place and premises
      4   ... Place for recreation and sport
      5   ... Street and highway
      6   ... Public building
      7   ... Resident institution
      8   ... Other specified places
      9   ... Place of accident not specified

233-236   [UCOD]   ICD CODE(9th REVISION)

      See the International Classification of Diseases,
      1975 Revision, Volume 1. For injuries and poisoning,
      the external cause is coded (E800-E999) rather
      than the Nature of Injury (800-999). These posi-
      tions do not include the letter E for the external
      cause of injury. For those causes tht do not have
      a 4th digit, location 224 is blank.

237-239   [UCODR61]   61 INFANT CAUSE RECODE

      A recode of the ICD cause code into 61 groups for
      NCHS publications. Further back in this document
      is a complete list of recodes and the causes

included.

010-680   ... Code range(not inclusive)

240 - 381   [MULTCOND]   MULTIPLE CONDITIONS

See the "International Classification of
Diseases", 1975 Revision, Volume 1. Both the
entity-axis and record-axis conditions are coded
according to this revision (9th).

240-241   [EANUM]   NUMBER OF ENTITY-AXIS CONDITIONS

00-20   ... Code range

242-381   [ENTITY]   ENTITY - AXIS CONDITIONS

Space has been provided for maximum of 20
conditions. Each condition takes 7 positions
in the record. Records that do not have 20
conditions are blank in the unused area.

Position 1: Part/line number on certificate

1   ... Part I, line 1 (a)
2   ... Part I, line 2 (b)
3   ... Part I, line 3 (c)
4   ... Part I, line 4 (d)
5   ... Part I, line 5 (e)
6   ... Part II,

Position 2: Sequence of condition within
            part/line

1-7   ... Code range

Position 3 - 6:Condition code (ICD 9th Revision)
              The codes are available online.
Position 7: Nature of Injury Flag

		1 ... Indicates that the code in positions

	1	... Indicates that the code in positions 3-6 is a Nature of Injury code
	0	... All other codes
242-248	7	1st Condition
249-255	7	2nd Condition
256-262	7	3rd Condition
263-269	7	4th Condition
270-276	7	5th Condition
277-283	7	6th Condition
284-290	7	7th Condition
291-297	7	8th Condition
298-304	7	9th Condition
305-311	7	10th Condition
312-318	7	11th Condition
319-325	7	12th Condition
326-332	7	13th Condition
333-339	7	14th Condition
340-346	7	15th Condition
347-353	7	16th Condition
354-360	7	17th Condition
361-367	7	18th Condition
368-374	7	19th Condition

| 375-381 | 7 | 20th Condition |

382-383   [RANUM]   NUMBER OF RECORD-AXIS CONDITIONS

           00-20   ... Code range

384-483   [RECORD]   RECORD - AXIS CONDITIONS

           Space has been provided for a maximum of 20
conditions. Each condition takes 5 positions
in the record. Records that do not have 20
conditions are blank in the unused area.

           Positions 1-4: Condition code (ICD 9th Revision)

           Position 5: Nature of Injury Flag

           1   ... Indicates that the code in
                positions 2-5 is a Nature of Injury code
           0   ... All other codes

384-388	5	1st Condition
389-393	5	2nd Condition
394-398	5	3rd Condition
399-403	5	4th Condition
404-408	5	5th Condition
409-413	5	6th Condition
414-418	5	7th Condition
419-423	5	8th Condition
424-428	5	9th Condition
429-433	5	10th Condition

434-438	5		11th Condition
439-443	5		12th Condition
444-448	5		13th Condition
449-453	5		14th Condition
454-458	5		15th Condition
459-463	5		16th Condition
464-468	5		17th Condition
469-473	5		18th Condition
474-478	5		19th Condition
475-483	5		20th Condition

484   [RESSTATD] RESIDENT STATUS - DEATH

    1   ... RESIDENTS:
State and county of occurrence
and residence are the same.

    2   ... INTRASTATE NONRESIDENTS:
State of occurrence and residence
are the same, but county is
different.

    3   ... INTERSTATE NONRESIDENTS:
State of occurrence and residence
are different, but both are in the
50 States and D.C.

    4   ... FOREIGN RESIDENTS:
State of occurrence is one of the
50 States or the District of
Columbia, but place of residence
of mother is outside of the 50
States and D.C.

485-501   Reserved Positions

502   [HOSPD]   HOSPITAL AND PATIENT STATUS

      1   ... Hospital, Clinic or Medical
         Center - Inpatient
      2   ... Hospital, Clinic or Medical
         Center - Outpatient or admitted to
         Emergency Room
      3   ... Hospital, clinic or medical
         center - Dead on arrival
      4   ... Hospital, Clinic or Medical
         Center - patient status unknown
      5   ... Nursing home
      6   ... Residence
      7   ... Other
      9   ... Place of death unknown

503-509   Reserved Positions (or just delete from public-release file)