Atherosclerosis Risk in Communities Study

Community Surveillance CHD Occurrences Data Dictionary

April 2017

Community Surveillance CHD Occurrences Data Dictionary

Occurrence: An occurrence refers to a single hospitalization, fatal or non-fatal, or an out-of-hospital death with a unique ID.

Occurrence	**Forms (not all may be in the database)**	**Comment**
Non-fatal Hospitalization	HRA, SXI, ECG forms and CEL (if surveillance eligible cohort)	A unique ID will be assigned to all related forms
Fatal Hospitalization	HRA, SXI, ECG forms, DTH, and CEL (if surveillance eligible cohort)	A unique ID will be assigned to all related forms. Fatal hospitalizations include all non-fatal hospitalized materials in addition to death related forms.
Out of Hospital Death	HRA (if ER/DOA or no Vital sign death), SXI, DTH, PHQ (up to two), IFI (up to three), COR and CEL (if surveillance eligible cohort)	A unique ID will be assigned to all related forms.

Table of Contents

1. Classification Variables

1.1. ECGDX

Purpose

To determine ECG diagnosis for a hospitalization in community surveillance.

Description

ECGDX is a character variable determined by selected variables in the Surveillance ECG (SECA) forms. One ID may have up to three SECA records noted as first (SECAFFLG), last (SECALFLG) or third (SECATFLG). ECGDX takes values according to Section 4.2.6 of Manual 3 (Surveillance Component Procedures). ECGDX is set to missing (' ') for occurrences where no ECG's forms are expected.

Type

Occurrence

Related Variables

ARICDX, ARICDX2, SECAFFLG, SECATFLG, SECALFLG, CEAAFLG, CEABFLG, CEBAFLG, CEBBFLG

1.2. ENZDX

Purpose

To determine an enzyme diagnosis (before downgrading) in community surveillance.

Description

ENZDX is a character variable determined by selected variables in the HRAA form. See Section 4.2.7 of Manual 3 (Surveillance Component Procedures, version 4.0) for details.

Type

Occurrence

Related Variables

ENZDX2, ARICDX, ARICDX2

1.3. ENZDX2

Purpose

To determine an enzyme diagnosis for hospitalized occurrences that have been downgraded in community surveillance.

Description

ENZDX2 is a character variable determined by ENZDX and downgrading criteria. Downgrading (only for occurrences with ENZDX=4) was done by a Special Reviewer to re-classify ("downgrade") the enzyme diagnosis if certain criteria met. Later in study downgrading was evaluated by computer algorithm.

Type

Occurrence

Algorithm

IF ENZDX=4, ENZSTAT = 2 and ARICDX = 3, 4, or 5 (Suspect MI, Probable MI, or Definite MI respectively), then ENZDX2 = Equivocal
Else, ENZDX2 = ENZDX

Remarks

ENZDX2 equals ENZDX for all occurrences that did not meet the criteria for downgrading. Downgrading was reserved only for occurrences with ENZDX=4, ENZSTAT = 2 and ARICDX = 3, 4, or 5 (Suspect MI, Probable MI, or Definite MI respectively).

Related Variables

ENZDX, ARICDX, ARICDX2

1.4. PAINDX

Purpose

To determine a diagnosis for cardiac pain in community surveillance.

Description

PAINDX is a character variable determined by HRAA25a. PAINDX=1 if pain is absent, =2 if pain is present. HRAA25a records the response to "Was there acute episodes of pain or discomfort anywhere in the chest, left arm or jaw, either within 72 hrs prior to arrival to this hospital or in conjunction with the in-hospital CHD event defined in 24b"?

Type

Occurrence

Remarks

If the HRAA form is missing or skips out prior to HRAA23 then PAINDX is set to missing ' '

Algorithm

PAINDX	HRAA25a	Description
'1'	N, U	Pain is absent
'2'	Y	Pain is present and may be of non-cardiac origin
' '		If HRAAFLG ≠ 'Y' or PARTHRA in {1 2 3 4 5 .I} (HRAA FORM NOT PRESENT OR A SKIP OUT)

Related Variables

HRAAFLG, PAINDX2

1.5. PAINDX2

Purpose

To determine a diagnosis for cardiac pain for occurrences that have been reviewed for possible downgrading in community surveillance.

Description

PAINDX2 is a character variable determined by PAINDX and HRA25d and/or downgrading result. Downgrading (only for occurrences that have cardiac pain present but of possibly non-cardiac origin) was done by a Special Reviewer to re-classify ("downgrade") the cardiac pain to absent. Later in study downgrading was evaluated by computer algorithm. HRAA25d records the response to "Was the discomfort or pain diagnosed as having a non-cardiac origin"?

PAINDX2=1 if cardiac pain is absent, =2 if present, =missing if out-of-hospital deaths or HRAA forms that skip out prior to answering HRAA23 or missing HRAA forms.

Type

Occurrence

Algorithm

PAINDX2	HRAA25a	HRAA25d	Description
'1'	N, U	Skipped	Pain is absent
'1'	Y	Y	Pain is present and Special Reviewer/computer algorithm determined to be of non-cardiac origin (Downgraded)
'2'	Y	Y	Pain is present and Special Reviewer determined to be of cardiac origin (Not Downgraded)
'2'	Y	N/U	Pain is present and possibly of cardiac origin (NOT DOWNGRADED)
' '			If HRAAFLG ≠ 'Y' or PARTHRA in {1 2 3 4 5 .I} (HRAA FORM NOT PRESENT OR A SKIP OUT)

Related Variables

HRAAFLG, PAINDX

1.6. ARICDX

Purpose

To determine a MI diagnosis for hospitalized occurrences in community surveillance.

Description

ARICDX is a character variable determined by the value of cardiac pain, ECG and enzymes.

Type

Occurrence

Remarks

ARICDX is determined by computer algorithm, and is defined only for Hospitalized occurrences that did not skip out prior to HRA22.

The difference between ARICDX and ARICDX2 is that ARICDX2 is determined by the value of downgraded cardiac pain (PAINDX2) and enzymes (ENZDX2)

Related Variables

PAINDX, ECGDX, ENZDX

1.7. ARICDX2

Purpose

To determine a MI diagnosis for hospitalized occurrences in community surveillance using downgraded pain and enzyme diagnosis.

Description

ARICDX2 is a character variable determined by the value of downgraded cardiac pain (PAINDX2), ECG (ECGDX) and downgraded enzymes (ENZDX2).

Type

Occurrence

Algorithm

```
%survdx(pain=paindx2,enz=enzdx2,ecg=ecgdx,surv=survdx2,aric=aricdx2);
```

Remarks

The difference between ARICDX and ARICDX2 is that ARICDX2 is determined by the value of downgraded cardiac pain (PAINDX2) and enzymes (ENZDX2)

Related Variables

PAINDX2 (downgraded pain dx), ECGDX, ENZDX2 (downgraded enzyme dx)

2. Identification Variables

2.1. CHRT_ID

Purpose

To map a surveillance ID to the Cohort participant ID.

Description

CHRT_ID is the cohort participant ID assigned at exam visit 1. CHRT_ID is the same for all occurrences within a person, and is missing for occurrences not from cohort participants.

Type

Occurrence

Algorithm

celb02 = chrt_id

Related variables

EVT_ID2, C_EVTID, ID, CELB02

2.2. CENTER

Purpose

To identify the field center from which a participant for a given occurrence originates.

Type

Demographic

Description

CENTER is a character variable.

2.3. ID

Purpose

All events are assigned a surveillance ID number to uniquely identify each event in surveillance processing.

Type

Occurrence

Description

A unique surveillance event ID is assigned to each event.

2.4. EVENT_ID

Purpose

To determine an event ID for Community Surveillance.

Description

EVENT_ID is the ID from the most recent occurrence within an event. EVENT_ID is the same for all occurrences within an event. If an event contains only one ID, then EVENT_ID=ID. Occurrences are considered linked if they happened within 28 days of each other.

Type

Event

Remarks

EVENT_ID (for community surveillance) is an analogy to C_EVTID (for cohort surveillance).

Related Variables

LINK, C_ EVTID

2.5. TEACHING

Purpose

To determine whether a hospital is a teaching hospital.

Description

To determine whether the hospital is a teaching hospital.

Type

Occurrence

Algorithm

Forsyth County	Name	Hospital Type	Notes
11	North Carolina Baptist	Teaching	
12	Forsyth County Memorial	Non teaching	
13	Medical Park	Non teaching	
14	Kernersville	Non teaching	
15	Clemmons Medical Center	Non teaching	
96	Hospital outside study area	--	
Jackson			
21	University of Mississippi Med Center	Teaching	
22	Veterans Administration Hospital	Teaching	
23	St. Dominic's Hospital	Non teaching	
24	Central Mississippi Medical Center	Non teaching	
25	Mississippi Baptist Hospital	Non teaching	
26	River Oaks Hospital	Non teaching	
27	Madison County Medical Center	Non teaching	JHS only
28	Rankin Medical Center	Non teaching	JHS only
97	Hospital out of study area	--	
Minneapolis			
30	Abbott-Northwestern	Teaching	
31	Riverside Medical Center	Teaching	
32	Fairview-Southdale	Non teaching	
33	Fairview-Ridges	Non teaching	
34	Hennepin County Med. Center	Teaching	
35	Mercy Hospital	Non teaching	
36	Methodist Hospital	Teaching	
37	Metropolitan	Non teaching	
38	Midway	Non teaching	
39	Mt. Sinai	Non teaching	
40	North Memorial	Teaching	
41	St. Paul Ramsey	Non teaching	
42	St. John's Northeast	Non teaching	
43	St. Mary's	Non teaching	

44	Unity	Non teaching
45	University of Minnesota Hospital	Teaching
46	VA Hospital	Teaching
47	Fairview Medical Center	Non teaching
48	Phillips Eye Institute	Non teaching
98	Hospital out of study area	--

Washington Co.

51	Meritus Medical Center	Non teaching
52	Western Maryland Center	Non Teaching
53	VA Medical Center, WV	Non Teaching
54	University of Maryland	Teaching
55	Frederick Memorial	Non teaching
56	Johns Hopkins Hospital	Teaching
57	Washington Hospital Center	Non Teaching
58	George Washington University	Teaching
59	Georgetown University	Teaching
60	Saint Joseph Medical Center	Non teaching
61	Washington Adventist	Non teaching
62	Sinai Hospital	Non teaching
63	Union Memorial	Non Teaching
99	Hospital out of study area	--

Related Variables

HRAA01A

3. Sampling/Eligibility Variables

3.1. SAMP

Purpose

To determine the sampling probabilities for occurrences in Community Surveillance.

Type

Occurrence

Description

SAMP is a numeric variable determined by the ICD-9 codes and the date of discharge. Please refer to Section 2.2 of Manual 3 for sampling fractions. Note that SAMP is calculated based on the actual length of each month.

Remarks

SAMP assigns a missing (.) value for occurrences that are ineligible or eligible from transfer (which may not be date eligible).

3.2. S_ELIG4

Purpose

To determine whether an occurrence is surveillance eligible (code, date and age all checked).

Type

Occurrence

Description

This variable describes whether the occurrence is surveillance eligible. To be eligible, the Discharge/Death Age must be in the 35 – 74 age range, the date of death/discharge should be within the sampling frame, or if transferred from/to an eligible occurrence and has eligible ICD codes, or if it is linked to an eligible OHD.

Algorithm

S_ELIG4=1 if discharge/death age is in 35-74 and has eligible ICD codes, and date of discharge/death is within the sampling frame; OR if transferred from/to an eligible occurrence and had eligible ICD codes; OR if linked to eligible OHD.

S_ELIG4=0 otherwise

Related Variables

HRAA14, DTHA09, DTHELIG, S_ELIG

3.3. I_410

Purpose

To identify code eligible Surveillance HRAA forms with a 410 code recorded in HRAA02 (or HRAA15). Note that this variable has a value of 1 if the discharge code is 410 even if there is also a 411 or 412-414. To get disjoint categories in priority order, see the variables in the events file/dictionary.

Type

Occurrence

Description

I_410 is a numeric variable determined by the responses to the Hospital Record Abstraction form (HRA) version A items 2a through 2z (or items 15a through 15z). HRAA02 records the ICD9-CM diagnosis codes from the hospital discharge index or Eligibility Form. HRAA15 records the ICD9-CM diagnosis codes from the hospital medical record.

Remarks

If the hospitalization is eligible using HRAA02 responses then HRAA15 is not considered.

Algorithm

I_410 **Algorithm** (based on COL 5 in the table below)

1 If ONE of the responses on the selected HRAA item (02 or 15) identified in COL5 below have integer value = 410

0 If none of the responses on the selected HRAA item (HRAA02 or HRAA15) identified in column 5 below have integer value = 410 but have other eligible codes

. Otherwise

HRAA02		HRAA15		COL (5) HRAA variable used in the algorithm
Code eligible	Code and sampling date eligible	Code eligible	Code and sampling date eligible	
Y	NA	any	NA	HRAA02
N	NA	Y	NA	HRAA15
N	NA	N	NA	Not used (I_410 =.)

NA= Not applicable Related VariablesH02_MISS H15_MISS HRAAFLG I_411 I_412_14 I_OTHERS

3.4. I_411

Purpose

To identify code eligible Surveillance HRAA forms with a 411 code recorded in HRAA02 (or HRAA15). Note that this variable has a value of 1 if the discharge code is 411 even if there is also a 410 or 412-414. To get disjoint categories in priority order, see the variables in the events file/dictionary.

Type

Occurrence

Description

I_411 is a numeric variable determined by the responses to the Hospital Record Abstraction form (HRA) version A items 2a through 2z (or items 15a through 15z). HRAA02 records the ICD9-CM diagnosis codes from the hospital Discharge index or Eligibility Form. HRAA15 records the ICD9-CM diagnosis codes from the hospital medical record.

Remarks

If the hospitalization is eligible using HRAA02 responses then HRAA15 is not considered.

Algorithm

I_411	**Algorithm** (based on COL 5 in the table below)
1	If an of the responses on the selected HRAA item (02 or 15) identified in COL 5 below have integer value = 411
0	If none of the responses on the selected HRAA item (HRAA02 or HRAA15) identified in column 5 below have integer value = 411 but have other eligible codes
.	Otherwise

HRAA02		HRAA15		COL (5) HRAA variable used in the algorithm
Code eligible	Code and sampling date eligible	Code eligible	Code and sampling date eligible	
Y	Y	any	Any	HRAA02
Y	N	Y	Y	HRAA15
Y	N	Y	N	HRAA02
Y	N	N	N	HRAA02
N	N	Y	Y	HRAA15
N	N	Y	N	HRAA15
N	N	N	N	Not used (I_411 =.)

NA= Not applicable
Related Variables
H02_MISS H15_MISS HRAAFLG I_410 I_412_14 I_OTHERS

3.5. I_412_14

Purpose

To identify code eligible Surveillance HRAA forms with a 412_14 code recorded in HRAA02 (or HRAA15). Note that this variable has a value of 1 if the discharge code is 412-414 even if there is also a 410 or 411. To get disjoint categories in priority order, see the variables in the events file/dictionary.

Type

Occurrence

Description

I_412_14 is a numeric variable determined by the responses to the Hospital Record Abstraction form (HRA) version A items 2a through 2z (or items 15a through 15z). HRAA02 records the ICD9-CM diagnosis codes from the hospital Discharge index or Eligibility Form. HRAA15 records the ICD9-CM diagnosis codes from the hospital medical record.

Remarks

If the hospitalization is eligible using HRAA02 responses then HRAA15 is not considered.

Algorithm

I_412_14 **Algorithm** (based on COL 5 in the table below)

1 If an of the responses on the selected HRAA item (02 or 15) identified in COL 5 below have integer value = 412_14

0 If none of the responses on the selected HRAA item (HRAA02 or HRAA15) identified in column 5 below have integer value = 412_14 but have other eligible codes

. Otherwise

HRAA02		HRAA15		COL (5) HRAA variable used in the algorithm
Code eligible	Code and sampling date eligible	Code eligible	Code and sampling date eligible	
Y	Y	any	Any	HRAA02
Y	N	Y	Y	HRAA15
Y	N	Y	N	HRAA02
Y	N	N	N	HRAA02
N	N	Y	Y	HRAA15
N	N	Y	N	HRAA15
N	N	N	N	Not used (I_412_14 = .)

NA= Not applicable
Related VariablesH02_MISS H15_MISS HRAAFLG I_410 I_411 I_OTHERS

3.6. I_C410

Purpose

To identify code eligible cohort CELB forms with a 410 code in CELB10. Note that this variable has a value of 1 if the discharge code is 410 even if there is also a 411 or 412-414. To get disjoint categories in priority order, see the variables in the events file/dictionary.

Type

Occurrence

Description

I_C410 is a numeric variable determined by the response to the Cohort Event Eligibility Form (CEL) items 10a through 10z. CELB10 records the hospital discharge diagnosis and procedure codes.

Algorithm

I_C410=1	if any response on CELB10a-z has integer value = 410
I_C410=0	otherwise

3.7. I_C411

Purpose

To identify code eligible cohort CELB forms with a 411 code in CELB10. Note that this variable has a value of 1 if the discharge code is 411 even if there is also a 410 or 412-414. To get disjoint categories in priority order, see the variables in the events file/dictionary.

Type

Occurrence

Description

I_C411 is a numeric variable determined by the response to the Cohort Event Eligibility Form (CEL) items 10a through 10z. CELB10 records the hospital discharge diagnosis and procedure codes.

Algorithm

I_C411=1	if any response on CELB10a-z has integer value = 411
I_C411=0	otherwise

3.8. I_C412_4

Purpose

To identify code eligible cohort CELB forms with a 412_4 code in CELB10. Note that this variable has a value of 1 if the discharge code is 412-414 even if there is also a 410 or 411. To get disjoint categories in priority order, see the variables in the events file/dictionary.

Type

Occurrence

Description

I_C412_4 is a numeric variable determined by the response to the Cohort Event Eligibility Form (CEL) items 10a through 10z. CELB10 records the hospital discharge diagnosis and procedure codes.

Algorithm

I_C412_4=1	if any response on CELB10a-z has integer value = 412_4
I_C412_4=0	otherwise

3.9. I_COTHER

Purpose

To identify code eligible cohort CELB forms with a 402, 427, 428, OR 518.4 code in CELB10. Note that this variable has a value of 1 if the discharge code is 402, 427, 428, OR 518.4, even if there is also a 410 or 411 or 412-414. To get disjoint categories in priority order, see the variables in the events file/dictionary.

Type

Occurrence

Description

I_COTHER is a numeric variable determined by the response to the Cohort Event Eligibility Form (CEL) items 10a through 10z. CELB10 records the hospital discharge diagnosis and procedure codes.

Algorithm

I_COTHER=1 if any response on CELB10a-z has integer value = 402, 427, 428 or = 518.4

I_COTHER=0 otherwise

3.10. I_OTHERS

Purpose

To identify code eligible Surveillance HRAA forms with a 402 427 428 or 518.4 code recorded in HRAA02 (or HRAA15). Note that this variable has a value of 1 if the discharge code is 402, 427, 428, OR 518.4, even if there is also a 410 or 411 or 412-414. To get disjoint categories in priority order, see the variables in the events file/dictionary.

Type

Occurrence

Description

I_OTHERS is a numeric variable determined by the responses to the Hospital Record Abstraction form (HRA) version A items 2a through 2z (or items 15a through 15z). HRAA02 records the ICD9-CM diagnosis codes from the hospital Discharge index or Eligibility Form. HRAA15 records the ICD9-CM diagnosis codes from the hospital medical record.

Remarks

If the hospitalization is eligible using HRAA02 responses then HRAA15 is not considered.

Algorithm

I_OTHERS **Algorithm** (based on COL 5 in the table below)

1 If an of the responses on the selected HRAA item (02 or 15) identified in COL 5 below have integer value = 402, 427, 428 or = 518.4

0 If none of the responses on the selected HRAA item (HRAA02 or HRAA15) identified in column 5 below have integer value = 402, 427, 428 or equal to 518.4 but have other eligible codes

. Otherwise

HRAA02		HRAA15		COL (5) HRAA variable used in the algorithm
Code eligible	Code and sampling date eligible	Code eligible	Code and sampling date eligible	
Y	Y	any	Any	HRAA02
Y	N	Y	Y	HRAA15
Y	N	Y	N	HRAA02
Y	N	N	N	HRAA02
N	N	Y	Y	HRAA15
N	N	Y	N	HRAA15
N	N	N	N	Not used (I_OTHERS = .)

NA= Not applicable
Related VariablesH02_MISS H15_MISS HRAAFLG I_410 I_411 I_412-14

4. Event Date Variables

4.1. EVTYPE01

Purpose

To determine the event type classification of individual occurrences in our database.

Type

Occurrence

Description

EVTYPE01 is a character variable determined by the responses to the following selected HRAA DTHA, SXIA and CELB (if cohort) form items as follows:

Form	**Item**
DTHA:	DTHA12, DTHA13
HRAA:	HRAA17 HRAA19a HRAA19b HRAA19d
SXIA:	SXIA03
CELB:	CELB06 CELB12

Remarks

If the form items disagree as to the event type classification then the discrepancy is identified and sent to the FC for investigation. If the discrepancy remains irresolvable then SXIA03 is used as the arbitrator and as the source of the variable EVTYPE01.
An ER/DOA or a no vital sign death is treated as an Out-of-hospital death (EVTYPE01='O') regardless of the presence of a HRAA form

Related Variables

EVTYPE1, EVTYPE2, EVTYPE3, SXIA03, IFI1FLAG, PHQ1FLAG, CORAFLAG, CELB07, HRAAFLAG, DTHAFLG, HRAAFLG, SXIAFLG, CELBFLG

4.2. DDATE

Purpose

To determine a death date for a death occurrence or a discharge date for each non-fatal hospitalization.

Type

Occurrence

Description

DDATE is the derived Death/Discharge Date. It is taken from the forms, DTH, HRAA, CEL, SXI, COR, SEC, CEA, and CEB.

Remarks

If a date of death/discharge is not available, DDATE takes the value of first ECG date if available.

Algorithm

DDATE assumes one of the following non-missing dates in the listing order: DTH09, HRAA14, CELB04, SXIA04, SXIA03b, CORA01, SECA03, CEAD02, CEBD02. If all the nine dates listed above are missing, then DDATE takes missing value.

Related Variables

DDATE0

4.3. DDATE0

Purpose

To determine an earliest recorded date for all occurrences.

Type

Occurrence

Description

DDATE0 describes the earliest recorded date or all the occurrences, as determined by HRA form. If the information is not in there, then DDATE0 takes on the value of DDATE (obtained by forms DTH, HRAA, CEL, SXI, COR, SEC, CEA, and CEB).

Algorithm

DDATE0 takes the value of HRAA11A if it is not missing. If HRAA11A is missing then DDATE0 takes the value of DDATE.

Remarks

DDATE0 takes the value of date of arrival (DOA), or date of death/discharge if DOA is not available, or date of the first ECG recorded if none of above dates is present.

Related Variables

DDATE, SXIA03, SXIA04

4.4. DTHDATE

Purpose

To determine a death date for fatal occurrences.

Type

Occurrence

Description

DTHDATE will assume one of the following dates: DTH09, HRAA14, CELB04, or DDATE as indicated on the table below if the person is deceased. DTH09 records the date of death from the death Certificate, HRAA14 records the date of discharge or death from the hospital medical record, CELB04 records the date of death or discharge looking at a series of forms, and CELB06 asks if it is a death. Non-fatal occurrences have DTHDATE = .N. If EVTYPE01 cannot be determined, DTHDATE=.U

Algorithm

DTHDATE	Description
DTH09	If (EVTYPE01='I' or 'O') and DTH09 is non-missing
HRAA14	If (EVTYPE01='I' or 'O') and DTH09 is missing and (HRAA17=D and HRAA14 is not missing)
CELB04	IF (EVTYPE01='I' OR 'O') AND DTH09 AND HRAA14 ARE BOTH MISSING AND CELB04 IS NOT MISSING AND CELB06 = 'Y'
DDATE	If (EVTYPE01='I' or 'O') and (DTH09, HRAA14, and CELB04 are all missing)
.N	If EVTYPE01 = 'N' **(Non-Fatal occurrence)**
.U	Otherwise

Remarks

DTHDATE may contain non-validated death dates obtained from information other than the death certificates. To use only validated death date, DTH09 is the variable to use.

Related Variables

EVTYPE01, DDATE

4.5. HSPDATE

Purpose

To determine a date for each hospitalization. HSPDATE is used to determine linkage among multiple occurrences as well as MIDATE algorithm.

Type

Occurrence

Description

HSPDATE describes the date for each hospitalization. HSPDATE is determined by information in the HRA form (variables: HRAA11a, HRAA44a, and HRAA24c).

Algorithm

The HSPDATE algorithm may be summarized as follows:

Onset **before** arrival (HRAA23a)	Onset **after** arrival (HRAA24b)	HSPDATE (in order as listed below)
Any	N	HRAA11a, HRAA44a
Y	Y	HRAA44a, HRAA11a, HRAA24c
not Y	Y	HRAA24c, HRAA44a, HRAA11a

If DOA/ER, no vital sign death or no MI occurrences, then HSPDATE=HRAA11a.

If no HRAA form, or Chart not found, then HSPDATE=missing.

Remarks

HSPDATE assumes one of the following dates: HRAA11a, HRAA24c or HRAA44a as indicated below.

Related Variables

PARTHRA, HRAA24B, HRAA24C, HRAA44a, HRAA11a

5. Linkage Variables

5.1. LINK

Purpose

To determine if multiple eligible occurrences for a single person are linked "within 28 days" using hospitalization date or death date.

Description

Occurrences that are "linked" (LINK=1) are considered an event and have the same EVENT_ID.

Type

Occurrence

Remarks

Non-fatal hospitalizations that skip-out of the HRAA before a HSPDATE can be determined will be assigned hospital date from the following variables in order listed: CELB04 SXIA04 CORA01 SECA03 CEAA02 CEBA02 CEAB02 CEBB02. For non-hospitalized fatal events, death date is used for "hospital date".

Algorithm

Number of Occurrence(s)	LINK	ALGORITHM
ONE	0	LINK = 0 for individual occurrence
TWO	1	If the difference between the two hospital dates is < 29 days **(LINK=1 for Both Occurrences)**
	0	If the difference between the two hospital dates is ≥ 29 days **(LINK=0 for Both Occurrences)**
More than TWO	1	If the difference between the first and the last hospital date is < 29 days **(LINK=1 for <u>All</u> occurrences)**
	1 or 0	If each pair of occurrences has hospital dates ≤ 28 days of each other, but the difference between the first and last hospital dates is > 28 days then **Special Reviewer assigns LINK to all the occurrences**

Example
Given the following occurrences for one person:

Occurrence ID	HSPDATE		EVTYPE01	LINK	EVENT_ID
1031900	11/13/87	'N'	1	1016494	
1140635	12/03/87	'N'	1	1016494	
1016494	12/10/87	'N'	1	1016494	
1019572	12/14/88	'I'	0	1019572	

then EVENT_ID = 1016494 (from the most current occurrence within an EVENT) for all occurrences that make up the event.

Related Variables

EVTYPE01, HSPDATE, DTHDATE, EVENT_ID, ID