

JHS-ARIC

Cohort Surveillance CHD Events Data Dictionary

An event consists of a single eligible occurrence or group of eligible occurrences that are linked based on the 28 day criteria and belonging to the same individual. All Occurrence(s) that makes an event will have the same EVENT_ID.

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1. Classification Variables

1.1. CALDX2

Purpose

To determine the computerized MI diagnosis for hospitalized events in cohort surveillance.

Values

<i>CALDX2</i>		<i>Computerized MI Diagnosis For The Whole Event</i>	
<i>N</i>	<i>Value</i>	<i>Description</i>	
1389	1	No MI	
1	2	No MI	
517	3	Suspect MI	
197	4	Probable MI	
249	5	Definite MI	
2246		Missing	

Description

CALDX2 is a character variable determined by the worst pain (CPAINDX2), worst enzyme (CENZDX2) and the worst ECG diagnosis (CECGDXX) within an event. CALDX2 is the final computer MI classification for an event in cohort surveillance.

Type

Event

Related Variables

CPAINDX2, CENZDX2, CECGDXX

1.2. CMIDX

Purpose

To determine a MI Diagnosis for hospitalized events among cohort participants.

Values

<i>CMIDX</i>		<i>MI Classification Of An Event</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
192	DEFMI	Definite MI
155	NO-HOSP	Unlinked out-of-hospital deaths
3517	NO-MI	No MI
182	PROBMI	Probable MI
551	SUSPMI	Suspect MI
2	UNCLASS	Unclassifiable

Description

CMIDX is the final MI classification variable determined by MMCC reviews or computer algorithm if MMCC reviews are not required.

Type

Event

Remarks

Unlinked out-of-hospital deaths have CMIDX='NO-HOSP' (no hospitalizations)

Related Variables

CARCDX, CARCDXX2, CMIDX, CFATALDX

1.3. CFATALDX

Purpose

To determine a CHD diagnosis for fatal events among cohort participants.

Values

<i>CFATALDX</i>		<i>Death Classification Of An Event</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
90	DEFFATCHD	Definite fatal CHD
1	DEFFATCHDDTH	Definite fatal CHD
9	DEFFATMI	Definite fatal MI
150	NONCHDDTH	Non-CHD death
4249	NONFAT	Non fatal hospitalizations
76	POSSFATCHD	Possible fatal CHD
24	UNCLASSIFIABLE	Unclassifiable

Description

CFATALDX is the final CHD classification variable for fatal events determined by MMCC reviews or computer algorithm if MMCC reviews are not required.

Type

Event

Remarks

Non-fatal hospitalizations (EVTYPE01='N' for all occurrences within an event) have CFATALDX='NONFAT'.

Related Variables

CMIDX, EVTYPE01

1.4. CNSTEMI

Purpose

To indicate an MI event without Segment Elevation among cohort participants

Values

<i>CNSTEMI</i>		<i>Non-ST-Segment Elevation MI</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
2485	0	No
173	1	Yes

Description

CNSTEMI is the binary variable for Probable or Definite MIs without ST – segment elevation.

Type

Event

Remarks

If the MI was Probable or Definite and the Enzyme Diagnosis was Equivocal or Abnormal and the S-T segment was not elevated, then CNSTEMI is Yes (1)

Related Variables

CMIDX, CENZDX, STEL

1.5. CSTEMI

Purpose

To indicate an MI event with Segment Elevation among cohort participants

Values

<i>CSTEMI</i>		<i>ST-Segment Elevation MI</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
2633	0	No
25	1	Yes

Description

CNSTEMI is the binary variable for Probable or Definite MIs with ST – segment elevation

Type

Event

Remarks

If the MI was Probable or Definite and the Enzyme Diagnosis was Equivocal or Abnormal and the S-T segment was elevated, then CSTEMI is Yes (1)

Related Variables

CMIDX, CENZDX, STEL

1.6. WCARICDX

Purpose

To determine the worst computer MI Diagnosis for hospitalized events among cohort participants.

Values

<i>WCARICDX</i>		<i>Worst Computer MI Diagnosis For Hospitalized Event</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
1321	1	No MI
496	3	Suspect MI
185	4	Probable MI
235	5	Definite MI
2361		Missing

Description

WCARICDX is a character variable determined by the largest value of CARCDXX2 within a cohort event. For out-of-hospital deaths (linked or unlinked), WCARICDX is missing. For example, if an event consists of 3 hospitalizations, and the computerized MI diagnosis (CARCDXX2) for each hospitalization has value 1, 3 and 5, then WCARICDX = 5.

Type

Event

Remarks

WCARICDX (for cohort surveillance) is an analogy to WARICDX (for community surveillance).

Related Variables

CARCDXX2

2. Identification Variables

2.1. CENTER

Purpose

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

Values

<i>CENTER</i>		<i>Field Center</i>	<i>(Cir)</i>
<i>N</i>	<i>Value</i>	<i>Description</i>	
1934	H	JHS	
2665	J	Jackson	

Type

Event

Description

CENTER is a character variable.

2.2. CHRT_ID

Purpose

To map a surveillance ID to the Cohort participant ID.

Values

<i>CHRT_ID</i>		<i>Cohort Participant ID</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
4599	Present	Text suppressed

Description

CHRT_ID is the cohort participant ID from CELB02. 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

2.3. C_EVTID

Purpose

To determine an event ID for Cohort Surveillance.

Values

<i>C_EVTID</i>		<i>Latest Occurrence ID In Cohort Event</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
4599	Present	Text suppressed

Description

C_EVTID is a character variable. C_EVTID is the latest occurrence ID in Cohort Event (which may consist of more than one occurrence). C_EVTID is used to create the event level ID.

Type

Occurrence

2.4. EVT_ID2

Purpose

To determine an event ID for Cohort Surveillance

Values

<i>EVT_ID2</i>		<i>ID Of The Latest Occurrence Of A Person</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
28424	Present	Text suppressed

Description

EVT_ID2 is the ID of the latest Occurrence of a person.

Type

Occurrence

2.5. ID

Purpose

To determine an event ID for Cohort Surveillance.

Values

<i>ID</i>		<i>ARIC Community Surveillance Event ID</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
4599	Present	Text suppressed

Type

Occurrence

Description

ID is the ARIC Occurrence ID.

2.6. HRAA01A

Purpose

To determine hospital number.

Values

<i>HRAA01A</i>		<i>Hospital Code Number Hra01a.</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
2575	Present	Text suppressed
2024		Missing

Type

Occurrence

Description

To determine the hospital code number.

Algorithm

<u>Forsyth County</u>	<u>Name</u>	<u>Hospital Type</u>	<u>Notes</u>
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	--	
<u>Jackson</u>			
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	--	
<u>Minneapolis</u>			
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

Teaching

2.7. TEACHING

Purpose

To determine if the hospital is a teaching hospital.

Values

<i>TEACHING</i>		<i>Teaching Status Of Hospital</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
2214	NonTeaching	
340	Teaching	
2045		Missing

Type

Occurrence

Description

Teaching is the teaching status of the hospital.

Algorithm

See the algorithm under HRAA01A (hospital codes) for details.

Related Variables

HRAA01A

3. Event Date Variables

3.1 CESFDATE

Purpose

In order to obtain the earliest date of an occurrence in an event in Cohort Surveillance.

Values

<i>CESFDATE</i>		<i>Earliest Date Of Cohort Event</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
28424	Range	01/13/1987 - 12/30/2011

Description

CESFDATE is the earliest Date of Cohort Event. It is derived by taking the date of the first occurrence for an event.

Type

Occurrence

Algorithm

Take the date of the first occurrence in an event.

SAS Code

```
if first.c_evtid then do;  
  nopair=1; nopair2=1; pairmiss=0; cesfdate=esdate;
```

Related variables

ESDATE

3.2 CEVTDAT3

Purpose

To determine an event date for cohort participants.

Values

<i>CEVTDAT3</i>		<i>Event Date</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
4599	Range	01/24/1987 - 12/31/2013

Type

Event

Description

For definite or probable MI, CEVTDAT3 is CMIDATE. For definite fatal CHD, CEVTDAT3 is the death date from DTH09. For others, CEVTDAT3 is the last date with known status in Surveillance (DDATE, date of discharge/death).

Algorithm

If CMIDX is Definite or Probable MI then CEVTDAT3 is CMIDATE. If CFATALDX is Definite or Probable Fatal CHD event, then CEVTDAT3 is DTHA09. Otherwise, CEVTDAT3 is DDATE.

SAS Code

```
if cmidx in ("DEFMI","PROBMI") then cevtdat3=cmidate;  
else if cfataldx in ("DEFFATCHD","DEFFATMI") then cevtdat3=dtha09;  
else cevtdat3=ddate;
```

Remarks

CEVTDAT3 (for cohort surveillance) is an analogy to EVTDAT3 (for community surveillance).

Related Variables

CMIDATE, CMIDX, CFATALDX, DDATE

3.3. CMIDATE

Purpose

To determine a MI date for Events in Cohort Surveillance.

Values

<i>CMIDATE</i>		<i>Date Of MI For Cohort Event</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
4599	Range	01/13/1987 - 12/29/2013

Type

Event

Description

CMIDATE is the hospitalization date (HSPDATE) from the occurrence that has the “worst” CARCDXX2 classification within an Event. If CARCDXX2 are even, choose the HSPDATE from the occurrence with more severe enzymes (greater CENZDX2). If CENZDX2 are again even, choose the earlier HSPDATE.

Algorithm

Event Description	ALGORITHM
One occurrence	CMIDATE=HSPDATE
Multiple linked occurrences: All are hospitalizations	CMIDATE=HSPDATE of the occurrence with the worst ARICDX2. If even CARCDXX2, use the one with greater ENZDX2. If even ENZDX2, use the earlier HSPDATE
Multiple linked occurrences: Out-of-hospital death linked to a non-fatal hospitalizations	CMIDATE=HSPDATE of the hospitalized occurrence with the worst CARCDXX2. If even CARCDXX2, follow above algorithm.

Remarks

CMIDATE (for cohort surveillance) is an analogy to MIDATE (for community surveillance).

Related Variables

HSPDATE, CARCDXX2, CENZDX2, ESDATE

3.4. DTHDATE

Purpose

To determine a death date for fatal occurrences.

Values

<i>DTHDATE</i>		<i>Date Of Death For An Event</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
352	Range	07/06/2001 - 12/24/2013
25857		Missing

Type

Occurrence

Description

DTHDATE will assume one of the following dates: DTH09, HRAA14, CELB04, or DDATE in the order indicated in 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 <u>and</u> (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. Sudden Cardiac Death Variables

4.1. SUDTH1

Purpose

Identify fatal events as “Sudden Cardiac Death”, defined by death within 1 hour from onset of acute symptoms.

Values

<i>SUDTH1</i>		<i>Sudden Cardiac Death Within 1 Hour From Onset Of Symptoms</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
27	U	Death time not definable
95	0	Otherwise
33	1	Death time* from event is less than 1 hour
4444		Missing

Description

SUDTH1 is determined by HRA25g or (DTH09, DTH11, HRA11a & HRA11b) for in-hospital deaths (IHD). It is determined by MMCC reviews (MDX15b/CDX15b) for out-of-hospital deaths (OHD).

Type

Event

Remarks

SUDTH1 is defined for a subset of fatal events with the following fatal classifications: definite fatal MI, definite fatal CHD and possible fatal CHD. A classification of SUDTH1 exists for both community and cohort events. Information from the most current batch is used to define SUDTH1 when there are multiple batches of reviews (due to data changes).

Algorithm

*definition of Death time:

IHD: death time is defined by HRA25g (time from onset of this event to death), or by the difference between death time (DTH09/11) and admission time (HRA11a/b) if HRA25g is unknown. If death time is missing and the length between death date and admission date is greater than one day, then death time is greater than 24 hours.

OHD: If there is only one reviewer, take the value of MDX15b/CDX15b.

If there are more than one reviewer, then

- a. Take adjudication value if present and not unknown, else
- b. Take the non-missing value if only one time diagnosis is available and not unknown, else
- c. Take a random selection of 2 non-missing values if two time diagnosis are both available and both not unknown, else
- d. Death time is unclassifiable if no death time diagnosis is available.

Related Variables

HRA25g (time from onset of this event to death), DTH09 (death date), DTH11 (death time), HRA11a (date of arrival), HRA11b (arrival time), MDX15b (time to death from onset of acute symptoms in community surveillance), CDX15b (time to death from onset of acute symptoms in cohort surveillance).

4.2. SUDTH24

Purpose

Identify fatal events as “Sudden Cardiac Death”, defined by death within 24 hours from onset of acute symptoms.

Values

<i>SUDTH24</i>		<i>Sudden Death Within 24 Hours From Onset Of Acute Symptoms</i>
<i>N</i>	<i>Value</i>	<i>Description</i>
6	U	Death time not definable
28	0	Otherwise
53	1	Death time* from event is less than or equal to 24 hour
4512		Missing

Description

SUDTH24 is determined by HRA25g or DTH09, DTH11, HRA11a and HRA11b for in-hospital deaths (IHD). It is determined by MMCC reviews (MDX15b/CDX15b) for out-of-hospital deaths (OHD).

Type

Event

Remarks

SUDTH24 is similar to SUDTH1, except it's defined based on death within 24 hours.

Algorithm

*definition of Death time:

IHD: death time is defined by HRA25g (time from onset of this event to death), or by the difference between death time (DTH09/11) and admission time (HRA11a/b) if HRA25g is unknown. If death time is missing and the length between death date and admission date is greater than one day, then death time is greater than 24 hours.

OHD: If there is only one reviewer, take the value of MDX15b/CDX15b.

If there are more than one reviewer, then

- a. Take adjudication value if present and not unknown, else
- b. Take the non-missing value if only one time diagnosis is available and not unknown, else
- c. Take a random selection of 2 non-missing values if two time diagnosis are both available and both not unknown, else
- d. Death time is unclassifiable if no death time diagnosis is available.

Related Variables

HRA25g (time from onset of this event to death), DTH09 (death date), DTH11 (death time), HRA11a (date of arrival), HRA11b (arrival time), MDX15b (time to death from onset of acute symptoms in community surveillance), CDX15b (time to death from onset of acute symptoms in cohort surveillance).

