JHS-ARIC
Cohort Surveillance Stroke Derived Variable Dictionary

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1. COMPDIAG

Purpose

To determine the stroke diagnosis by computer algorithm.

Values

COMPDIAG		*Computer Diagnosis*
N	*Value*	*Description*
10	A	Definite Subarachnoid Hemorrhage (SAH)
25	B	Definite Brain Hemorrhage (IPH)
155	C	Definite Brain Infarction, Thrombotic (TIB)
46	D	Definite Brain Infarction, Non-carotid Embolic (EIB)
54	G	Probable TIB
11	H	Probable EIB
9	I	Possible Stroke of Undetermined Type
479	J	If not A - I (No Stroke)

Description

COMPDIAG is the computer diagnosis for stroke events. Values A-H represent definite or probable strokes, value I represents possible strokes with undermined type, and values J-L represent no strokes. See COMP_DX for formatted version of this variable. Also see stroke classification algorithm in manual 3 for details.

Type

Stroke

Algorithm

COMPDIAG	Description
A	Definite Subarachnoid Hemorrhage (SAH)
B	Definite Brain Hemorrhage (IPH)
C	Definite Brain Infarction, Thrombotic (TIB)
D	Definite Brain Infarction, Non-carotid Embolic (EIB)
E	Probable SAH
F	Probable IPH
G	Probable TIB
H	Probable EIB
I	Possible Stroke of Undetermined Type
J	If not A - I (No Stroke)
K	COMPDIAG =J & DTH18 in 430-438 & STR2=N & not OHD (Undocumented (no chart) Fatal Cases with Stroke Codes)
L	COMPDIAG =J and DTH18 in 430-438 & OHD (Out of Hospital Deaths with Stroke Codes)

Related variables

COMP_DX, DTH18 (underlying cause of death), EVENTYPE, FINAL_DX, FINALDX, STR2 (hospital chart)

2. COMP_DX

Purpose

To determine the formatted value of stroke diagnosis by computer algorithm.

Values

COMP_DX		*Formatted Computer Diagnosis*
N	*Value*	*Description*
46	DEF_EIB	Definite Brain Infarction, Non-carotid Embolic (EIB)
25	DEF_IPH	Definite Brain Hemorrhage (IPH)
10	DEF_SAH	Definite Subarachnoid Hemorrhage (SAH)
155	DEF_TIB	Definite Brain Infarction, Thrombotic (TIB)
479	NO_STR	If not A - I (No Stroke)
19	OHD_STR	Out of Hospital Deaths with Stroke Codes
9	POSS_STR	Possible Stroke of Undetermined Type
11	PROB_EIB	Probable EIB
54	PROB_TIB	Probable TIB

Description

COMP_DX is the formatted value of COMPDIAG for stroke computer diagnosis.

Type

Stroke

Algorithm

COMP_DX	Description
DEF_SAH	if COMPDIAG = A (Definite SAH)
DEF_IPH	if COMPDIAG = B (Definite IPH)
DEF_TIB	if COMPDIAG = C (Definite TIB)
DEF_EIB	if COMPDIAG = D (Definite EIB)
PROB_SAH	if COMPDIAG = E (Probable SAH)
PROB_IPH	if COMPDIAG = F (Probable IPH)
PROB_TIB	if COMPDIAG = G (Probable TIB)
PROB_EIB	if COMPDIAG = H (Probable EIB)
POSS_STR	if COMPDIAG = I (Possible Stroke of Undetermined Type)
NO_STR	if COMPDIAG = J (No stroke)
UNDC_STR	if COMPDIAG = K (Undocumented Fatal Cases with Stroke Codes)
OHD_STR	if COMPDIAG = L (Out-of-Hospital Deaths with Stroke Codes)

Related Variables

COMPDIAG, FINAL_DX, FINALDX

3. FINALDX

Purpose

To determine the final stroke classification.

Values

FINALDX		*Final Diagnosis*
N	*Value*	*Description*
5	A	Definite Subarachnoid Hemorrhage (SAH)
22	B	Definite Brain Hemorrhage (IPH)
186	C	Definite Brain Infarction, Thrombotic (TIB)
50	D	Definite Brain Infarction, Non-carotid Embolic (EIB)
1	E	Probable SAH
56	G	Probable TIB
10	H	Probable EIB
5	I	Possible Stroke of Undetermined Type
453	J	If not A - I (No Stroke)
1		Missing

Description

FINALDX takes adjudication values if present, or reviewer's diagnosis if agree with computer diagnosis, or computer's diagnosis if MMCC reviews are not required. See FINAL_DX for formatted version of this variable.

Type

Stroke

Remarks

1. Since the protocol was changed from 2 reviewers to 1 reviewer, one of the reviewer's diagnosis was randomly selected to perform the following algorithm for determining the final diagnosis.

2. Adjudication values and cases meeting exclusionary conditions are in small letters. Since FINALDX contains capital and small letter characters, it is advised that you **change all characters to uppercase** (**UPCASE** in SAS) whenever appropriate.

Algorithm

FINALDX	Description
COMPDIAG	If MMCC reviews are not required (skipouts: OHD, no chart or no neurological symptoms/signs. COMPDIAG= J, K or L for these cases.)
SDX5	if adjudicated cases, or if reviewer diagnosis=computer diagnosis (SDX5 takes values of A-J)
j	if meets exclusionary conditions
K	if upcase(FINALDX)=J & DTH18 in 430-438 & STR2=N & not OHD (Undocumented Fatal Cases with Stroke Codes)
L	if upcase(FINALDX)=J & DTH18 in 430-438 & OHD (Out of Hospital Deaths with Stroke Codes)

Related Variables

COMPDIAG, COMP_DX, DTH18 (underlying cause of death), FINAL_DX, SDX5 (reviewer's stroke diagnosis), STR2 (hospital chart)

4. FINAL_DX

Purpose

To determine the formatted value of final stroke classification.

Values

FINAL_DX		*Formatted Final Diagnosis*
N	*Value*	*Description*
50	DEF_EIB	Definite Brain Infarction, Non-carotid Embolic (EIB)
22	DEF_IPH	Definite Brain Hemorrhage (IPH)
5	DEF_SAH	Definite Subarachnoid Hemorrhage (SAH)
186	DEF_TIB	Definite Brain Infarction, Thrombotic (TIB)
48	EXCOND	If not A - I (No Stroke)
405	NO_STR	If not A - I (No Stroke)
5	OHD_STR	Out of Hospital Deaths with Stroke Codes
10	POSS_STR	Possible Stroke of Undetermined Type
1	PROB_EIB	Probable EIB
56	PROB_SAH	Probable SAH
50	PROB_TIB	Probable TIB
1		Missing

Description

FINAL_DX is the formatted value of the upcased FINALDX.

Type

Stroke

Algorithm

FINAL_DX	Description
DEF_SAH	if upcase(FINALDX) = A (Definite SAH)
DEF_IPH	if upcase(FINALDX) = B (Definite IPH)
DEF_TIB	if upcase(FINALDX) = C (Definite TIB)
DEF_EIB	if upcase(FINALDX) = D (Definite EIB)
PROB_SAH	if upcase(FINALDX) = E (Probable SAH)
PROB_IPH	if upcase(FINALDX) = F (Probable IPH)
PROB_TIB	if upcase(FINALDX) = G (Probable TIB)
PROB_EIB	if upcase(FINALDX) = H (Probable EIB)
POSS_STR	if upcase(FINALDX) = I (Possible Stroke of Undetermined Type)
NO_STR	if upcase(FINALDX) = J (No stroke)
UNDC_STR	if upcase(FINALDX) = K (Undocumented Fatal Cases with Stroke Codes)
OHD_STR	if upcase(FINALDX) = L (Out-of-hospital Deaths with Stroke Codes)

Related Variables

COMP_DX, COMPDIAG, FINALDX, SDX3 **(**exclusionary conditions for diagnostic criteria)

5. EVENTYPE

Purpose

To determine the event type classification for stroke events.

Values

EVENTYPE		*Derived Event Type*
N	*Value*	*Description*
34	I	In-hospital death
738	N	Non-fatal event
17	O	Out-of-hospital death

Description

EVENTYPE is a character variable for event type determined by STR15 and derived variable EVTYPE01. The outcome O is for out-of-hospital death, I for in-hospital death, and N for non-fatal events.

Type

Stroke

Algorithm

EVENTYPE	Description
EVTYPE01	if EVTYPE01 is not missing
N	if EVTYPE01 is missing, and STR15=A
I	if EVTYPE01 is missing, and STR15=D

Related Variables

EVTYPE01(event type variable defined in CHD Surveillance), STR15 (discharged alive or dead)

6. YEAR

Purpose

To define the stroke event year.

Values

YEAR		*Event Year From Strc12, Strc14 Or Celb04*
N	*Value*	*Description*
789	Range	1988 - 2013 (median=2007 mean=2006.1 std=5.6)

Description

YEAR is the admission or discharge/death year that is determined by the listing order STR12, STR14, CEL04, HRA14, DTH09.

Type

Stroke

Algorithm

YEAR is the year from the listing order: STR12, STR14, CEL04, HRA14 or DTH09, minus 1900. The resulting value of YEAR is a 2-digit number.

Related Variables

STR12 (date of admission), STR14 (date of discharge), CEL04 (date of discharge/death), HRA14 (date of discharge/death), DTH09 (date of death).

7. SK_ELIG2

Purpose

To determine eligibility for stroke abstractions.

Values

SK_ELIG2		*Stroke Eligibility*
N	*Value*	*Description*
773	1	Cohort hospitalized events with stroke* ICD codes (eligible)
16	2	Out-of-hospital deaths with ICD-9 code 430-438 in the underlying case of death (eligible)

Description

A cohort event is eligible for stroke investigation if 1) hospitalized events has stroke related terms in the discharge summary, or has eligible stroke ICD codes; 2) if the underlying cause of death for out-of-hospital deaths contains ICD-9 codes 430-438; 3) if transferred from/to an eligible event. Note that events prior to 1997 that have ICD-9 code 430-438 were eligible for stroke abstractions. At and after 1997, only code 430-436 was abstracted for stroke. The distributed 1987-1997 stroke files only included eligible events (SK_ELIG2=1-3).

Type

Stroke

Algorithm

SK_ELIG2	Description
1	Cohort hospitalized events with stroke* ICD codes (eligible)
2	Out-of-hospital deaths with ICD-9 code 430-438 in the underlying case of death (eligible)
3	Transfers from/to an eligible stroke event whose SK_ELIG2=1 (eligible)
4	Hospitalized events contains only ICD-9 code 437-438 in and after year 1997
5	Events with stroke history in HRA form (ineligible)
.C	Confirmed events that were not eligible
0	Other ineligibles

Related Variables

CEL11E, CEL10, DTH18, STR11

8. ID

Purpose

To determine a stroke event ID.

Values

ID		*Aric Surveillance Event ID (Cir)*
N	*Value*	*Description*
789	Present	Text suppressed

Description

ID is a character variable. ID is a unique identifier for each stroke event. There may be multiple ID values for a cohort participant ID if the participant has multiple stroke events.

Type

Stroke

Related Variables

CHRT_ID, CELB02

9. CHRT_ID

Purpose

To map a surveillance ID to the Cohort participant ID.

Values

CHRT_ID		*Cohort Participant ID* *Q2*
N	*Value*	*Description*
789	Present	Text suppressed

Description

CELB02 is a character variable. CELB02 is the cohort participant ID from question number 2 of the Cohort Event Eligibility (CEL) form. CELB02 is the same for all occurrences within a person. For any community surveillance occurrence that is not for an ARIC cohort participant CELB02 is missing.

Type

Stroke

Related Variables

CELB02

10. STRC1A

Purpose

To determine hospital code number

Values

STRC1A		*Hospital Code Number*
N	*Value*	*Description*
470	Present	Text suppressed
319		Missing

Description

STRC1a is a character variable. STRC1A is from question 1A of the Cohort Stroke Abstraction (STRC) form to determine the hospital code number. If the hospital is outside of the study community, 96 - 99 were entered. See Algorithm in the next page for the detailed list of hospitals.

Type

Stroke

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

TEACHING

11. TEACHING

Purpose

To determine hospital's teaching status

Values

TEACHING		*Teaching Status Of Hospital*
N	*Value*	*Description*
391	Non Teaching	Non Teaching Hospital
77	Teaching	Teaching Hospital
321		Missing

Description

TEACHING is a character variable. It is derived from STRC1A to determine the teaching status of each hospital.

Type

Stroke

Algorithm

See algorithm of STRC1A for the details.

Related Variables

STRC1A