



Atherosclerosis Risk in Communities Study

Cohort Exam Visit 6 NCS

STATUS61 Derived Variable Dictionary (v.1)

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Prepared by the Collaborative Studies Coordinating Center

ARIC STATUS61 Derived Variable Dictionary

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NEW OR CHANGED FROM PREVIOUS DISTRIBUTION

This table describes the changes to the last published STATUS61 dictionary. As the dataset undergoes modifications, this table will describe the updates made to the previously distributed dataset.

Modification Date	Variable Name	Reason(s) for Change
190927	DEMDXL*_6n DATE_DEMDXL*_6n SOURCE_DEMDXL*_6n * = 1, 2a, 2b, 2c, 3 n = 61 (level1, 3) or 62 (level 2a, b, c)	Surveillance event year 2017 has been finalized and frozen; leveled dementia variables have been frozen accordingly.
180724	DEMDXL*_6n DATE_DEMDXL*_6n SOURCE_DEMDXL*_6n * = 1, 2a, 2b, 2c, 3 n = 61 (level1, 3) or 62 (level 2a, b, c)	Added leveled dementia variables for period up through the end of V6 data collection, 12/31/2017.

1. OVERVIEW

The STATUS61 dataset has 15,792 records, one for each ARIC participant. The purpose of this dataset is to provide to ARIC collaborators widely used, verified derived variables for the entire cohort, not limited to the participants who came to the current visit (V6). The dataset naming conventions are as follows: The dataset name retains the dataset creation date (ex: STATUS61_180718) until the dataset is considered final, frozen. After a dataset is frozen, the creation date is dropped from the dataset name (ex: STATUS61). The first digit in the dataset name refers to the current visit number. The second digit in the dataset name is incremented when the current dataset undergoes significant changes. The variable naming convention is similar: Across-visit variables have identical names except for the second to last digit in the variable name, which represents the visit number (ex: GENDER51 at Visit 5 vs. GENDER61 at Visit 6). The last digit in the variable name identifies the definition version of a variable.

STATUS variables are derived from the data collected from the previous and current visits, ARIC cohort surveillance and ARIC follow-up; their definitions are evaluated as of the last date of visit 6 data collection, 12/31/2017.

2. ADMINISTRATIVE

2.1 SUBJECTID (ARIC Subject ID (CIR))

Type: Character; length: \$7.

2.2 ID (ARIC ID – same as Subject ID)

Type: Character; length: \$7.

2.3 CENTER (Field Center)

Description: Character variable with four possible values derived from the enrollment site:
F: Forsyth County, North Carolina
J: The city of Jackson, Mississippi
M: Selected northwestern suburbs of Minneapolis, Minnesota
W: Washington County, Maryland

Type: Character; length: \$1.

Algorithm: CENTER = First letter of the subject ID

Source variable(s): SUBJECTID

3. ARIC VISIT COMPLETION AND STUDY STATUS VARIABLES

3.1 DATEOFDEATH (Date of Death)

Description: Date variable indicating date of death compiled from previous visit dates and ARIC surveillance data.

Type: Date

Algorithm: If dtha09>NULL then dateofdeath=dtha09;
else if hraa14>NULL and hraa17="D" then dateofdeath=hraa14;
else if (celb04>NULL and celb06='Y') then dateofdeath=celb04;
else if dthdate>NULL then dateofdeath=dthdate;
else dateofdeath=NULL;

Source variable(s): dtha09 [C15DTHA1], hraa14 [C15HRAA1], celb04 and celb06 [C15CELB1], dthdate [ADER]

3.2 KNWNDEADBYVISIT21 (Participant is known to be dead at visit 2)

Description: Numeric indicator variable indicating that participant is known to be dead by the start of visit 2 (February 5, 1990): 0=No, 1=Yes.

Type: Numeric

Algorithm: if NULL<dateofdeath<='05Feb1990'd then knwndeadbyvisit21=1;
else knwndeadbyvisit21=0;

Source variable(s): dateofdeath

3.3 KNWNDEADBYVISIT31 (Participant is known to be dead at visit 3)

Description: Numeric indicator variable indicating that participant is known to be dead by the start of visit 3 (March 16, 1993): 0=No, 1=Yes.

Type: Numeric

Algorithm: if NULL<dateofdeath<='16Mar1993'd then knwndeadbyvisit31=1;
else knwndeadbyvisit31=0;

Source variable(s): dateofdeath

3.4 KNWNDEADBYVISIT41 (Participant is known to be dead at visit 4)

Description: Numeric indicator variable indicating that participant is known to be dead by the start of visit 4 (February 1, 1996): 0=No, 1=Yes.

Type: Numeric

Algorithm: if NULL<dateofdeath<='01Feb1996'd then knwndeadbyvisit41=1;
else knwndeadbyvisit41=0;

Source variable(s): dateofdeath

3.5 KNWNDEADBYVISIT51 (Participant is known to be dead at visit 5)

Description: Numeric indicator variable indicating that participant is known to be dead by the start of visit 5 (June 1, 2011): 0=No, 1=Yes.

Type: Numeric

Algorithm: if NULL<dateofdeath<='01Jun2011'd then knwndeadbyvisit51=1;
else knwndeadbyvisit51=0;

Source variable(s): dateofdeath

3.6 KNWNDEADBYVISIT61 (Participant is known to be dead at visit 6)

Description: Numeric indicator variable indicating that participant is known to be dead by the start of visit 6 (June 15, 2016): 0=No, 1=Yes.

Type: Numeric

Algorithm: if NULL<dateofdeath<='15Jun2016'd then knwndeadbyvisit61=1;
else knwndeadbyvisit61=0;

Source variable(s): dateofdeath

3.7 RESPOND21 (Participant completed visit 2)

Description: Categorical variable providing information on completion of visit 2: 0=Died prior to visit, 1=Completed visit, 2=Eligible for visit but died before completed, 3=Refused visit, lost, or did not get examined.

Type: Numeric

Algorithm: if knwndeadbyvisit21=1 then respond21=0;
else if v2date21>NULL then respond21=1;
else if '5Feb1990'd<=dateofdeath<='15Mar1993'd then respond21=2;
else respond21=3;

Source variable(s): dateofdeath, knwndeadbyvisit21, v2date21

3.8 RESPOND31 (Participant completed visit 3)

Description: Categorical variable providing information on completion of visit 3:
0=Died prior to visit, 1=Completed visit, 2=Eligible for visit but died before completed, 3=Refused visit, lost, or did not get examined.

Type: Numeric

Algorithm: if knwndeadbyvisit31=1 then respond31=0;
else if v3date31>NULL then respond31=1;
else if '16Mar1993'd<=dateofdeath<='31Jan1996'd then respond31=2;
else respond31=3;

Source variable(s): dateofdeath, knwndeadbyvisit31, v3date31

3.9 RESPOND41 (Participant completed visit 4)

Description: Categorical variable providing information on completion of visit 4:
0=Died prior to visit, 1=Completed visit, 2=Eligible for visit but died before completed, 3=Refused visit, lost, or did not get examined.

Type: Numeric

Algorithm: if knwndeadbyvisit41=1 then respond41=0;
else if v4date41>NULL then respond41=1;
else if '1Feb1996'd<=dateofdeath<='30Jan1999'd then respond41=2;
else respond41=3;

Source variable(s): dateofdeath, knwndeadbyvisit41, v4date41

3.10 RESPOND51 (Participant completed visit 5)

Description: Categorical variable providing information on completion of visit 5:
0=Died prior to visit, 1=Completed visit, 2=Eligible for visit but died before completed, 3=Refused visit, lost, or did not get examined.

Type: Numeric

Algorithm: if knwndeadbyvisit51=1 then respond51=0;
else if v5date51>NULL then respond51=1;
else if '01Jun2011'd<=dateofdeath<='01Sep2013'd then respond51=2;
else respond51=3;

Source variable(s): dateofdeath, knwndeadbyvisit51, v5date51

3.11 RESPOND61 (Participant completed visit 6)

Description: Categorical variable providing information on completion of visit 6: 0=Died prior to visit, 1=Completed visit, 2=Eligible for visit but died before completed, 3=Refused visit, lost, or did not get examined.

Type: Numeric

Algorithm: if stage_1_complete=1 then respond61=1;
else if knwndeadbyvisit61=1 then respond61=0;
else if '15Jun2016'd<=dateofdeath<='31Dec2017'd then respond61=2;
else respond61=3;

Source variable(s): dateofdeath, knwndeadbyvisit61, stage_1_complete

3.12 RESPOND22 (Participant completed visit 2 (yes or no))

Description: Indicator variable indicating completion of visit 2: 0=no, 1=yes.

Type: Numeric

Algorithm: if respond21=1 then respond22=1;
Else respond22=0;

Source variable(s): respond21

3.13 RESPOND32 (Participant completed visit 3 (yes or no))

Description: Indicator variable indicating completion of visit 3: 0=no, 1=yes.

Type: Numeric

Algorithm: if respond31=1 then respond32=1;
Else respond32=0;

Source variable(s): respond31

3.14 RESPOND42 (Participant completed visit 4 (yes or no))

Description: Indicator variable indicating completion of visit 4: 0=no, 1=yes.

Type: Numeric

Algorithm: if respond41=1 then respond42=1;
Else respond42=0;

Source variable(s): respond41

3.15 RESPOND52 (Participant completed visit 5 (yes or no))

Description: Indicator variable indicating completion of visit 5: 0=no, 1=yes.

Type: Numeric

Algorithm: if respond51=1 then respond52=1;
Else respond52=0;

Source variable(s): respond51

3.16 RESPOND62 (Participant completed visit 6 (yes or no))

Description: Indicator variable indicating completion of visit 6: 0=no, 1=yes.

Type: Numeric

Algorithm: if respond61=1 then respond62=1;
Else respond62=0;

Source variable(s): respond61

3.17 STATUSDATE21 (Either death date, date of visit 2 exam OR 05Feb1990)

Description: Date variable with status as of visit 2. Date is either date of completion of visit 2, date of death if dead by the start of visit 2, or the date that visit 2 began (05Feb1990).

Type: Date

Algorithm: if V2DATE21>NULL then statusdate21= V2DATE21;
else if knwndeadbyvisit21=1 then statusdate21=dateofdeath;
else statusdate21='05Feb1990'd;

Source variable(s): V2DATE21, knowndeaddbyvisit2, dateofdeath

3.18 STATUSDATE31 (Either death date, date of visit 3 exam OR 16Mar1993)

Description: Date variable with status as of visit 3. Date is either date of completion of visit 3, date of death if dead by the start of visit 3, or the date that visit 3 began (16Mar1993).

Type: Date

Algorithm: if V3DATE31>NULL then statusdate31= V3DATE31;
else if knwndeadbyvisit31=1 then statusdate31=dateofdeath;
else statusdate31='16Mar1993'd;

Source variable(s): V3DATE31, knowndeaddbyvisit3, dateofdeath

3.19 STATUSDATE41 (Either death date, date of visit 4 exam OR 01Feb1996)

Description: Date variable with status as of visit 4. Date is either date of completion of visit 4, date of death if dead by the start of visit 4, or the date that visit 4 began (01Feb1996).

Type: Date

Algorithm: if V4DATE41>NULL then statusdate41= V4DATE41;
else if knwndeadbyvisit41=1 then statusdate41=dateofdeath;
else statusdate41='01Feb1996'd;

Source variable(s): V4DATE41, knowndeaddbyvisit4, dateofdeath

3.20 STATUSDATE51 (Either death date, date of visit 5 exam OR 01Jun2011)

Description: Date variable with status as of visit 5. Date is either date of completion of visit 5, date of death if dead by the start of visit 5, or the date that visit 5 began (01Jun2011).

Type: Date

Algorithm: if V5DATE51>NULL then statusdate51= V5DATE51;
else if knwndeadbyvisit51=1 then statusdate51=dateofdeath;
else statusdate51='01Jun2011'd;

Source variable(s): V5DATE51, knowndeadbyvisit5, dateofdeath

3.21 STATUSDATE61 (Either death date, date of visit 6 exam OR 15Jun2016)

Description: Date variable with status as of visit 6. Date is either date of completion of visit 6, date of death if dead by the start of visit 6, or the date that visit 6 began (15Jun2016).

Type: Date

Algorithm: if V6DATE61>NULL then statusdate61= V6DATE61;
else if knwndeadbyvisit61=1 then statusdate61=dateofdeath;
else statusdate61='15Jun2016'd;

Source variable(s): V6DATE61, knowndeadbyvisit61, dateofdeath

3.22 STATUSHFDATE61 (Either death date, date of visit 6 exam OR 15Jun2016)

Description: Date variable with either the date of visit 6 or the date that visit 6 began (15Jun2016).

Type: Date

Algorithm: If V6DATE61>NULL then statusHFdate61= V6DATE61
else statusHFdate61='15Jun2016'd

Source variable(s): V6DATE61

3.23 LASTFUINTERVIEW_DATE61 (Date of last completed follow-up interview)

Description: Date variable reporting the last completed AFU contact before the end of V6 data collection, 31DEC2017.

Type: Date

Algorithm: the max value of AFUcomp1_A among the records for a single ID where AFUcomp2_A indicates that the interview was accomplished (AFUcomp2_a in ('A','C','D'))

Source variable(s): AFUcomp1_A, AFUcomp2_A

4. PHYSICAL VARIABLES AND INDICATORS

4.1 AGENATMENOPAUSEF (Age (years) at natural menopause)

Description: Numeric variable indicating age in years at natural menopause.

Type: Numeric

Algorithm:
if menops01=4 then agenatmenopause=rhxa08
else if menops21=4 then agenatmenopause=hhxb19
else if menops31=4 then agenatmenopause=rhxb7
else if menops41=4 then agenatmenopause=rhxc7
else agenatmenopause=NULL

Source variable(s): rhxa08, hhxb19, rhxb7, rhxc7, menops01, menops21, menops31, menops41

4.2 AGESRGMENOPAUSEF (Age (years) at surgical menopause)

Description: Numeric variable indicating age in years at surgical menopause.

Type: Numeric

Algorithm:
if menops01=5 then agesrgmenopause=rhxa08
else if menops21=5 then agesrgmenopause=hhxb19
else if menops31=5 then agesrgmenopause=rhxb7
else if menops41=5 then agesrgmenopause=rhxc7
else agesrgmenopause=NULL

Source variable(s): rhxa08, hhxb19, rhxb7, rhxc7, menops01, menops21, menops31, menops41

5. DISEASE INCIDENCE

5.1 INCSELFREPHBP61 (Self-Report Incident High Blood Pressure by JAN2018)

Description: Numeric indicator variable reporting if the participant self-reported high blood pressure by December 31, 2017. May be used in conjunction with INCSELFREPHBP_DATE61.

Format: 1=Yes, 0=No

Type: Numeric

Algorithm: If any of the records for a single ID have a Y value for either AFUcomp7c_G or AFUcomp14_M and NULL<afucomp1_A<="31DEC2017"d then INCSELFREPHBP61=1
Else if AFUcomp7c_G, AFUcomp14_M are (N,NULL) or (NULL,N) respectively in all records for a single ID, where NULL<afucomp1_A<="31DEC2017"d then INCSELFREPHBP61=NULL
Else INCSELFREPHBP61=0

Source variable(s): AFUcomp7c_G, AFUcomp14_M, AFUcomp1_A

5.2 INCSELFREPHBP_DATE61 (Self-Report Incident High Blood Pressure Date or Last Follow-up Date)

Description: Date variable with the date the first time a participant self-reported high blood pressure (through December 31, 2017); if participant never self-reported high blood pressure (INCSELFREPHBP61=0), then the date is either the most recent AFU or December 31, 2017, whichever is earlier. The variable is missing if there are no records for this ID.

Algorithm: INCSELFREPHBP_DATE61 = earliest value of AFUcomp1_A within the records for a single ID where a Y value is found for either AFUcomp7c_G or AFUcomp14_M (as long as AFUcomp1_A <="31DEC2017"d)
else INCSELFREPHBP_DATE61 = min(LASTFUINTERVIEW_DATE61,"31DEC2017"d)
if no records are found for a single ID then INCSELFREPHBP_DATE61=missing

Type: Date

Source variable(s): AFUcomp7c_G, AFUcomp14_M, AFUcomp1_A

5.3 INCSELFREPDM61 (Self-Report Diabetes Mellitus by JAN2018)

Description: Numeric indicator variable reporting if the participant self-reported diabetes mellitus by December 31, 2017. May be used in conjunction with INCSELFREPDM_DATE61.

Format: 1=Yes, 0=No

Algorithm: If any of the records for a single ID have a Y value for either AFUcomp7d_G or AFUcomp15_M and NULL<afucomp1_A<="31DEC2017"d then INCSELFREPDM61=1
Else if AFUcomp7d_G, AFUcomp15_M are (N,NULL) or (NULL,N) respectively in all records for a single ID, where NULL<afucomp1_A<="31DEC2017"d then INCSELFREPDM61=0
Else INCSELFREPDM61=NULL

Type: Numeric

Source variable(s): AFUcomp7d_G, AFUcomp15_M, AFYcomp1_U

5.4 INCSELFREPDM_DATE61 (Self-Report Diabetes Mellitus Date or Last Follow-up Date)

Description: Date variable with the date the first time a participant self-reported diabetes mellitus (through December 31, 2017); if participant never self-reported diabetes mellitus (INCSELFREPDM61=0), then the date is either the most recent AFU or December 31, 2017, whichever is earlier. The variable is missing if there are no records for this ID.

Type: Date

Algorithm: INCSELFREPDM_DATE61 = earliest value of AFUcomp1_A within the records for a single ID where a Y value is found for either AFUcomp7d_G or AFUcomp14_M (as long as AFUcomp1_A is not greater than "31DEC2017"d)
else use min(LASTFUINTERVIEW_DATE61,"31DEC2017"d)
else missing if no records are found for a single ID

Source variable(s): AFUcomp7d_G, AFUcomp15_M, AFYcomp1_U

5.5 INCSELFREPCLD61 (Self-Report Incident PVD or Claudication by JAN2018)

Description: Numeric variable reporting if the participant self-reported incident PVD or claudication by December 31, 2017. May be used in conjunction with INCSELFREPCLD_DATE61.

Format: 1=Yes, 0=No

Type: Numeric

Algorithm: INCSELFREPCLD61=1 if any of the records for a single ID have a Y value for either AFUcomp20c_L or AFUcomp20c_M and NULL<afucomp1_A<="31DEC2017"d
INCSELFREPCLD61=0 if AFUcomp20c_L, AFUcomp20c_M are (N,NULL) or (NULL,N) respectively in all records for a single ID, where NULL<afucomp1_A<="31DEC2017"d
INCSELFREPCLD61=NULL otherwise.

Source variable(s): AFUcomp20c_L, AFUcomp20c_M, AFUcomp1_a

5.6 INCSELFREPCLD_DATE61 (Self-Report Incident PVD or Claudication Date or Last Follow-up Date)

Description: Date variable with the date the first time a participant self-reported incident PVD or claudication (through December 31, 2017); if participant never self-reported incident PVD or claudication (INCSELFREPCLD61=0), then the date is either the most recent AFU or December 31, 2017, whichever is earlier. The variable is missing if there are no records for this ID.

Algorithm: INCSELFREPCLD_DATE61= earliest value of AFUcomp1_A within the records for a single ID where a Y value is found for either AFUcomp20c_L or AFUcomp20c_M (as long as AFUcomp1_A is not greater than "31DEC2017"d)
else use min(LASTFUINTERVIEW_DATE61,"31DEC2017"d)
else missing if no records are found for a single ID

Type: Date

Source variable(s): AFUcomp20c_L, AFUcomp20c_M, AFUcomp1_a

5.7 INCSELFREPAST61 (Self-Report Asthma by JAN2018)

Description: Numeric variable reporting if the participant self-reported asthma by December 31, 2017. May be used in conjunction with INCSELFREPAST_DATE61.

Format: 1=Yes, 0=No

Type: Numeric

Algorithm: INCSELFREPAST61=1 if any of the records for a single ID have a Y value for either AFUcomp20a_L or AFUcompomp7h_G and NULL<afucomp1_A<="31DEC2017"d
INCSELFREPAST61=0 if AFUcomp20a_L, AFUcomp7h_G are (N,NULL) or (NULL,N) respectively in all records for a single ID, where NULL<afucomp1_A<="31DEC2017"d
INCSELFREPAST61=NULL otherwise.

Source variable(s): AFUcomp20a_L, AFUcomp7h_G, AFUcomp1_a

5.8 INCSELFREPAST_DATE61 (Self-Report Asthma Date or Last Follow-up Date)

Description: Date variable with the date the first time a participant self-reported asthma (through December 31, 2017); if participant never self-reported asthma (INCSELFREPAST61=0), then the date is either the most recent AFU or December 31, 2017, whichever is earlier. The variable is missing if there are no records for this ID.

Type: Date

Algorithm: INCSELFREPAST_DATE61= earliest value of AFUcomp1_A within the records for a single ID where a Y value is found for either AFUcomp20a_L or AFUcomp7h_G (as long as AFUcomp1_A is not greater than "31DEC2017"d)
else use min(LASTFUINTERVIEW_DATE61,"31DEC2017"d)
else missing if no records are found for a single ID

Source variable(s): AFUcomp20a_L, AFUcomp7h_G, AFUcomp1_a

5.9 INCSELFREPLUNG61 (Self-Report Chronic Lung Disease by JAN2018)

Description: Numeric variable reporting if the participant self-reported chronic lung disease by December 31, 2017. May be used in conjunction with INCSELFREPLUNG_DATE61.

Format: 1=Yes, 0=No

Type: Numeric

Algorithm: INCSELFREPLUNG61=1 if any of the records for a single ID have a Y value for either AFUcomp18b_L or AFUcomp7g_G and NULL<afucomp1_A<="31DEC2017"d
INCSELFREPLUNG61=0 if AFUcomp18b_L, AFUcomp7g_G are (N,NULL) or (NULL,N) respectively in all records for a single ID, where NULL<afucomp1_A<="31DEC2017"d
INCSELFREPLUNG61=NULL otherwise.

Source variable(s): AFUcomp18b_L, AFUcomp7g_G, AFUcomp1_a

5.10 INCSELFREPLUNG_DATE61 (Self-Report Chronic Lung Disease Date or Last Follow-up Date)

Description: Date variable with the date the first time a participant self-reported chronic lung disease (through December 31, 2017); if participant never self-reported chronic lung disease (INCSELFREPLUNG61=0), then the date is either the most recent AFU or December 31, 2017, whichever is earlier. The variable is missing if there are no records for this ID.

Type: Date

Algorithm: INCSELFREPLUNG_DATE61= earliest value of AFUcomp1_A within the records for a single ID where a Y value is found for either AFUcomp18b_L or AFUcomp7g_G (as long as AFUcomp1_A is not greater than "31DEC2017"d)
else use min(LASTFUINTERVIEW_DATE61,"31DEC2017"d)
else missing if no records are found for a single ID

Source variable(s): AFUcomp18b_L, AFUcomp7g_G, AFUcomp1_a

5.11 INCSELFREPHF61 (Self-Report Heart Failure by JAN2018)

Description: Numeric variable reporting if the participant self-reported heart failure by December 31, 2017. May be used in conjunction with INCSELFREPHF_DATE61.

Format: 1=Yes, 0=No

Type: Numeric

Algorithm: INCSELFREPHF61=1 if any of the records for a single ID have a Y value for any AFUcomp7b_G, AFUcomp8_L, AFUcomp9_L, AFUcomp10_L, AFUcomp10_M, and NULL<afucomp1_A<="31DEC2017"d
ELSE INCSELFREPHF61=NULL if all AFUcomp7b_G, AFUcomp8_L, AFUcomp9_L, AFUcomp10_L, AFUcomp10_M are all missing or 'U' for every record for a single ID, where z<afucomp1_A<="31DEC2017"d
ELSE INCSELFREPHF61=0

Source variable(s): AFUcomp8_L, AFUcomp9_L, AFUcomp7b_G, AFUcomp10_M, AFUcomp10_L, AFUcomp1_a

4.12 INCSELFREPHF_DATE61 (Self-Report Heart failure Date or Last Follow-up Date)

Description: Date variable with the date the first time a participant self-reported heart failure (through December 31, 2017); if participant never self-reported heart failure (INCSELFREPHF61=0), then the date is either the most recent AFU or December 31, 2017, whichever is earlier. The variable is missing if there are no records for this ID.

Type: Date

Algorithm: INCSELFREPHF_DATE61= earliest value of AFUcomp1_A within the records for a single ID where a Y value is found for any AFUcomp7b_G, AFUcomp8_L, AFUcomp9_L, AFUcomp10_L, AFUcomp10_M, (as long as AFUcomp1_A is not greater than "31DEC2017"d)
else use min(LASTFUINTERVIEW_DATE61,"31DEC2017"d)
else missing if no records are found for a single ID

Source variable(s): AFUcomp8_L, AFUcomp9_L, AFUcomp7b_G, AFUcomp10_M, AFUcomp10_L, AFUcomp1_a

5.13 INCSELFREPAF61 (Self-Report Atrial Fibrillation by JAN2018)

Description: Numeric variable reporting if the participant self-reported atrial fibrillation by December 31, 2017. May be used in conjunction with INCSELFREPAF_DATE61.

Format: 1=Yes, 0=No

Type: Numeric

Algorithm: INCSELFREPAF61=1 if any of the records for a single ID have a Y value for either AFUcomp12_M or AFUcomp12_L and NULL<afucomp1_A<="31DEC2017"d
INCSELFREPAF61=0 if AFUcomp12_M, AFUcomp12_L are (N,NULL) or (NULL,N) respectively in all records for a single ID, where NULL<afucomp1_A<="31DEC2017"d
INCSELFREPAF61=NULL otherwise.

Source variable(s): AFUcomp12_M, AFUcomp12_L, AFUcomp1_a

5.14 INCSELFREPAF_DATE61 (Self-Report Atrial Fibrillation Date or Last Follow-up Date)

Description: Date variable with the date the first time a participant self-reported atrial fibrillation (through December 31, 2017); if participant never self-reported atrial fibrillation (INCSELFREPAF61=0), then the date is either the most recent AFU or December 31, 2017, whichever is earlier. The variable is missing if there are no records for this ID.

Type: Date

Algorithm: INCSELFREPAF_DATE61= earliest value of AFUcomp1_A within the records for a single ID where a Y value is found for either AFUcomp12_M or AFUcomp12_L (as long as AFUcomp1_A is not greater than "31DEC2017"d)
else use min(LASTFUINTERVIEW_DATE61,"31DEC2017"d)
else missing if no records are found for a single ID

Source variable(s): AFUcomp12_M, AFUcomp12_L, AFUcomp1_a

5.15 INCSELFREPSTK61 (Self-Report Stroke byJAN2018)

Description: Numeric variable reporting if the participant self-reported stroke by December 31, 2017. May be used in conjunction with INCSELFREPSTK_DATE61.

Format: 1=Yes, 0=No

Algorithm: INCSELFREPSTK61=1 if any of the records for a single ID have a Y value for either AFUcomp29_A or AFUcomp8b_K and NULL<afucomp1_A<="31DEC2017"d

INCSELFREPSTK61=0 if AFUcomp29_A, AFUcomp8b_K are (N,NULL) or (NULL,N) respectively in all records for a single ID, where NULL<afucomp1_A<="31DEC2017"d
INCSELFREPSTK61=NULL otherwise.

Type: Numeric

Source variable(s): AFUcomp29_A, AFUcomp8b_K, AFUcomp1_a

5.16 INCSELFREPSTK_DATE61 (Self-Report Stroke Date or Last Follow-up Date)

Description: Date variable with the date the first time a participant self-reported stroke (through December 31, 2017); if participant never self-reported stroke (INCSELFREPSTK61=0), then the date is either the most recent AFU or December 31, 2017, whichever is earlier. The variable is missing if there are no records for this ID.

Algorithm: INCSELFREPSTK_DATE61= earliest value of AFUcomp1_A within the records for a single ID where a Y value is found for either AFUcomp29_A or AFUcomp8b_K (as long as AFUcomp1_A is not greater than "31DEC2017"d)
else use min(LASTFUINTERVIEW_DATE61,"31DEC2017"d)
else missing if no records are found for a single ID

Type: Date

Source variable(s): AFUcomp29_A, AFUcomp8b_K, AFUcomp1_a

6. LEVELED DEMENTIA DIAGNOSES

The Neurocognitive Committee created five hierarchical, leveled dementia diagnosis variables for much of the cohort using:

1. Level 1 - neuropsychological data collected at V5 and/or V6
2. Level 2a -TICS, retrospective dementia surveillance from V5
3. Levels 2b, 2c - SIS (ARIC follow-up Six Item Screener) or AD8 (ARIC follow-up AD8 Dementia Screening Interview)
4. Level 3 - ARIC surveillance data collection on hospitalizations and deaths

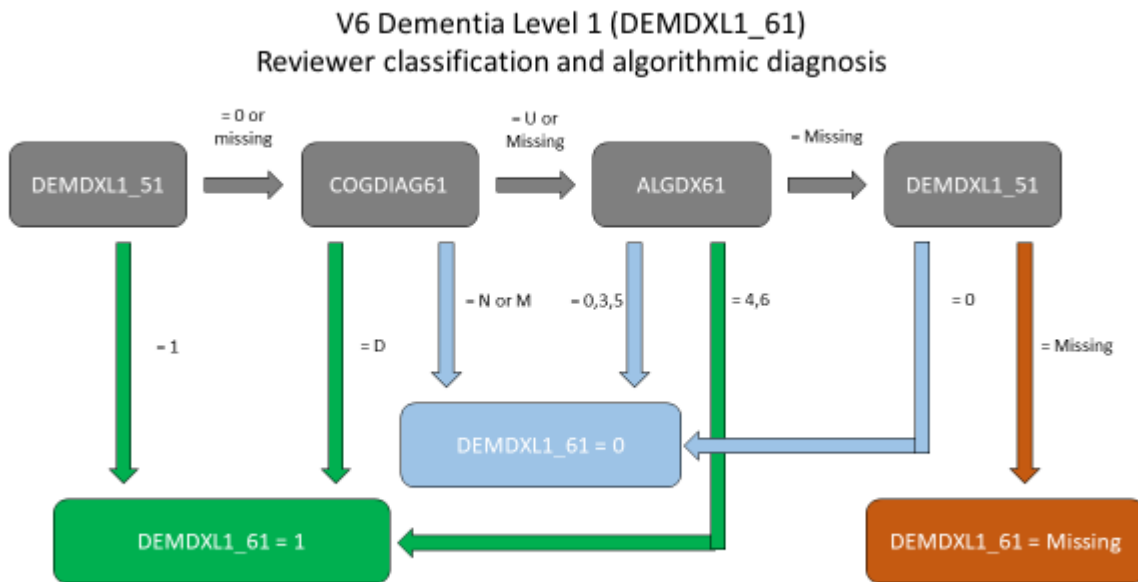
Each of the leveled diagnosis variables has an associated date of diagnosis and a source variable that describes the data source for the diagnosis and the diagnosis date. If the PPT has a dementia diagnosis, the date corresponds to the earliest date that dementia was detected. If the PPT has no dementia diagnosis, the corresponding date comes from the V5 NCS date, V6 NCS date, AD8 date, or SIS date. The latest date assigned to any of the dementia variables is December 31, 2017, the last day of ARIC V6 data collection.

The sequential order from available data sources considered for dementia ascertainment assignment are 1) reviewer diagnosis at V5 or V6, 2) algorithmic diagnosis at V5 or V6, 3) AD8 result, 4) two SIS results, 5) one SIS result if PPT is lost to follow up or deceased, 6) hospitalization discharge codes, and 7) death certificate codes.

The algorithms for determining the values for the leveled dementia variables are complicated and contain some temporary variable references. Find the temporary variables' definitions in Appendix A. Each variable has a graphical depiction of the definition in addition to a written one.

Level 1

The level 1 variable for dementia diagnosis (**DEMDXL1_61**) is complete for those PPTs who attended V5 or V6 and completed the neuropsychological assessments. The evaluation procedure for determining cognitive status at V5 and V6 is detailed in **Manual 17**. Briefly, cognitive, behavioral, and functional assessments were completed for all participants at V5 and V6. A subset of the 6538 PPTs at V5 and the 4003 PPTs at V6 were invited for more detailed assessments. An algorithmic profile was employed to assign cognitive status, and where the algorithmic profiles were concordant or discordant for MCI or dementia (see **Manual 17** for the profile definitions), reviewers evaluated all diagnostic materials and rendered a syndromic diagnosis. Dementia cases identified at V5 (DEMDXL1_51=1) are carried forward to the assignment of level 1 dementia at V6. At V6, the reviewer diagnosis superseded the algorithmic diagnosis when both are present. The non-dementia V5 assignment (DEMDXL1_51=0) persists in the absence of V6 data.



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6.1 DEMDXL1_61 (Dementia diagnosis level 1)

Description: Indicator variable for dementia based on both reviewer diagnosis and algorithmic syndromic diagnosis from both Visit 5 and Visit 6; reviewer diagnosis is given higher priority.

Format: 0=No, 1=Yes.

Type: Numeric

Algorithm: If DEMDXL1_51=1 then DEMDXL1_61=1
Else if COGDIAG61= "D" then DEMDXL1_61=1

Else if COGDIAG61= ("M" or "N") then DEMDXL1_61=0
 Else if COGDIAG61= ("U" or "") and ALGDX61 in (4,6) then
 DEMDXL1_61=1
 Else if COGDIAG61= ("U" or "") and ALGDX61 in (0,3,5) then
 DEMDXL1_61=0
 Else if COGDIAG61= ("U" or "") and ALGDX61=NULL and
 DEMDXL1_51=0 then DEMDXL1_61=0
 Else DEMDXL1_61=NULL

Source variable(s): DEMDXL1_51 (from STATUS51), COGDIAG61, ALGDX61

6.2 DATE_DEMDXL1_61 (Date for dementia diagnosis level 1)

Description: Date of diagnosis when the value of DEMDXL1_61=1 or the last date of assessment when DEMDXL1_61=0. When DEMDXL1_61=NULL then the date will also be missing. For those PPTs with a dementia diagnosis, the diagnosis date assigned will either be the date of the earliest hospitalization date with a dementia code, the V5 NCS exam date if the diagnosis occurred at V5, or the V6 exam date if the diagnosis occurred at V6.

Type: Date

Algorithm: For those PPTs with non-missing DEMDXL1_61:
 If DEMDXL1_51=1 then DATE_DEMDXL1_61=DATE_DEMDXL1_51
 Else if DEMDXL1_61=1 then DATE_DEMDXL1_61=minimum value of
 V6DATE61 and DEMENTEDCEL61_DATE
 Else if DEMDXL1_61=0 and the evaluation occurred at V6 then
 DATE_DEMDXL1_61=V6DATE61
 Else if DEMDXL1_61=0 and the evaluation occurred at V5 then
 DATE_DEMDXL1_61=V5DATE51

For those PPTs missing DEMDXL1_61:
 DATE_DEMDXL1_61=missing

Source variable(s): DEMDXL1_51 (from STATUS51), DATE_DEMDXL1_51 (from STATUS51), V5DATE51 (from DERIVE52), V6DATE61 (DERIVE61)

6.3 SOURCE_DEMDXL1_61 (Diagnosis and date source for DATE_DEMDXL1_61)

Description: Source variable created to indicate the diagnosis and date source for DATE_DEMDXL1_61

Type: Character

Algorithm: If DEMDXL1_61 = missing then SOURCE_DEMDXL1_61 should be set to missing

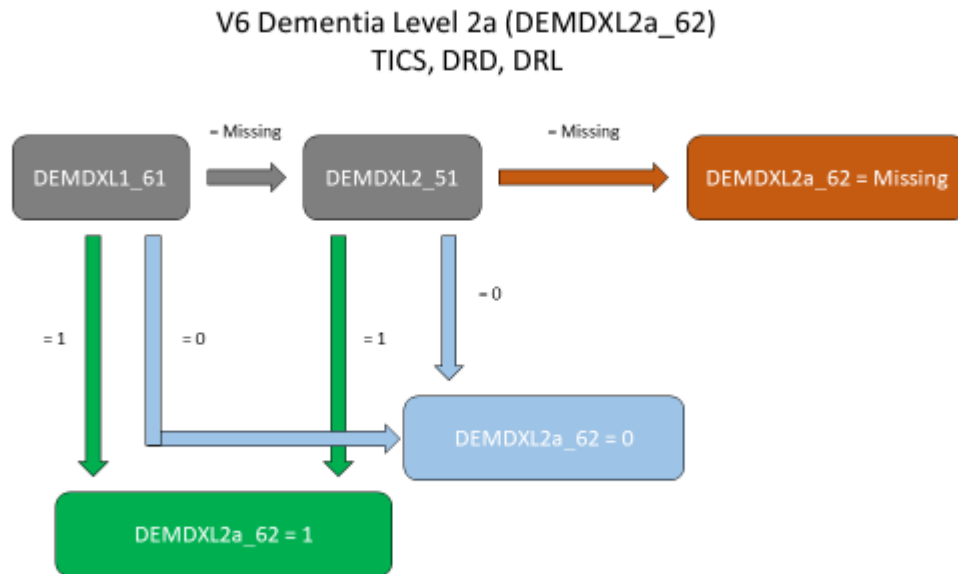
ELSE IF the diagnosis occurred at V5 (DEMDXL1_51=1)
SOURCE_DEMDXL1_61 = SOURCE_DEMDXL1_51

ELSE IF the diagnosis occurred at V6
SOURCE_DEMDXL1_61 = "V6" if DATE_DEMDXL1_61 took on Visit 6 date
OR = "V6+HOSP" if DATE_DEMDXL1_61 took on DEMENTEDCEL61_DATE

Source variable(s): DEMDXL1_51 (from STATUS51), SOURCE_DEMDXL1_51 (from STATUS51), DEMDXL1_61, DATE_DEMDXL1_61

Level 2a

For those PPTs who were alive at the time of V5 but declined the visit, dementia was determined using the education-adjusted TICS score or informant ratings for the CDR and FAQ. The level 2a dementia diagnosis variable, **DEMDXL2a_62**, is equal to **DEMDXL2_51** when **DEMDXL1_61** is missing. Refer to STATUS51 Derived Variable Dictionary for information on DEMDXL2_51.



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6.4 DEMDXL2a_62 (Dementia diagnosis level 2a)

Description: Indicator variable for dementia based on reviewer diagnosis, algorithmic syndromic diagnosis, TICS (telephone interview for cognitive status) and proxy interview. Diagnoses are prioritized, with the reviewer diagnosis being given highest priority, then the algorithmic syndromic diagnosis, TICS and finally the proxy interview.

Format: 0=No, 1=Yes.

Type: Numeric

Algorithm: For PPTs with DEMDXL1_61=1 or (DEMDXL1_61=0 and SOURCE_DEMDXL1_61 = "V6" or "V6+DOD"):
DEMDXL2a_62=DEMDXL1_61

For PPTs missing DEMDXL1_61 or (DEMDXL1_61=0 and SOURCE_DEMDXL1_61="V5"):
DEMDXL2a_62=DEMDXL2_51 when DEMDXL2_51 is 0 or 1

Source variable(s): DEMDXL1_51 (from STATUS51), DEMDXL1_61, SOURCE_DEMDXL1_61

6.5 DATE_DEMDXL2a_62 (Date for dementia diagnosis level 2a)

Description: Date of diagnosis when the value of DEMDXL2a_62=1 or the last date of assessment when DEMDXL2a_62=0. When DEMDXL2a_61=NULL then the date will also be missing. For those PPTs with a dementia diagnosis, the diagnosis date assigned will either be the date of the earliest hospitalization date with a dementia code, the V5 NCS exam date if the diagnosis occurred at V5, the V6 exam date if the diagnosis occurred at V6, or the TICS/ proxy interview date.

Type: Date

Algorithm: For PPTs with DEMDXL1_61=1 or (DEMDXL1_61=0 and SOURCE_DEMDXL1_61 = "V6" or "V6+DOD"):
DATE_DEMDXL2a_62=DATE_DEMDXL1_61

For PPTs missing DEMDXL1_61 or (DEMDXL1_61=0 and SOURCE_DEMDXL1_61="V5"):
DATE_DEMDXL2a_62=DATE_DEMDXL2_51 when DEMDXL2_51 is 0 or 1

For PPTs who have died, if DATE_DEMXL2a_62>DATEOFDEATH:
DATE_DEMXL2a_62=DATEOFDEATH

Source variable(s): DATE_DEMDXL2_51 (from STATUS51), DEMDXL1_61, SOURCE_DEMDXL1_61, DATE_DEMDXL1_61, DATEOFDEATH

6.6 SOURCE_DEMDXL2a_62 (Diagnosis and date source for DATE_DEMDXL2a_62)

Description: Source variable created to indicate the diagnosis and date source for DATE_DEMDXL2a_61

Type: Character

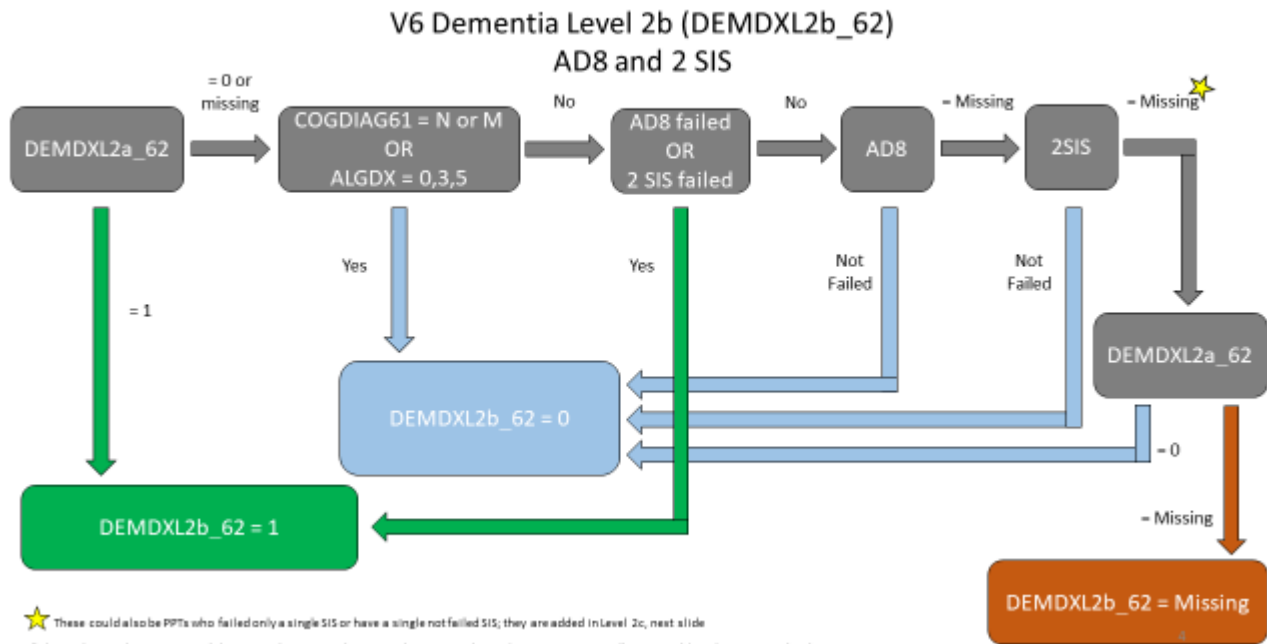
Algorithm: For PPTs with DEMDXL1_61=1 or (DEMDXL1_61=0 and SOURCE_DEMDXL1_61 = "V6" or "V6+DOD"):
SOURCE_DEMDXL2a_62=SOURCE_DEMDXL1_61

For PPTs missing DEMDXL1_61 or (DEMDXL1_61=0 and SOURCE_DEMDXL1_61="V5"):
SOURCE_DEMDXL2a_62=SOURCE_DEMDXL2_51
when DEMDXL2_51 is 0 or 1

Source variable(s): DEMDXL1_61, SOURCE_DEMDXL1_61, DEMDXL2_51 (from STATUS51), SOURCE_DEMDXL2_51 (from STATUS51)

Level 2b

For those PPTs who were alive at the time of V6 but who declined to be seen in person, dementia was determined using the AD8 score (AD8 Dementia Screening Interview) or two prorated SIS scores (Six Item Screener). The level 2b dementia diagnosis variable, **DEMDXL2b_62**, is equal to **DEMDXL2a_62** when the level 2a variable is non-missing (except in some cases where the source of **DEMDXL2a_62** is V5 and DEMDXL1_51=0). If level 2a was not present, the AD8 score was considered. When AD8 was not available, the value assigned was based on two available prorated SIS scores.



6.7 DEMDXL2b_62 (Dementia diagnosis level 2b)

Description:

Indicator variable for dementia based on reviewer diagnosis, algorithmic syndromic diagnosis, failed AD8 (AD8 Dementia Screening Interview), and two failed SIS (Six Item Screener). Diagnoses are prioritized, with the reviewer diagnosis being given highest priority, then the algorithmic syndromic diagnosis, TICS/proxy, AD8, and finally the SIS.

Format:

0=No, 1=Yes.

Type:

Numeric

Algorithm:

For PPTs with DEMDXL2a_62=1 or (DEMDXL2a_62=0 and SOURCE_DEMDXL2a_61 = "V6" or "V6+DOD"):
DEMDXL2b_62=DEMDXL2a_61

For PPTs missing DEMDXL2a_62 or (DEMDXL2a_62=0 and SOURCE_DEMDXL2a_61 not in ("V6" or "V6+DOD")) then do:
If AD8FAILURE=1 or SISFAILURECAT=2 then DEMDXL2b_62=1
If AD8FAILURE=0 and SISFAILURECAT=2 after AD8 (AD8FAILUREDATE <= SISFAILUREDATE <= 31DEC2017) then DEMDXL2b_62=1
Else if AD8FAILURE=0 then DEMDXL2b_62=0

For PPTs missing DEMDXL2a_62 or (DEMDXL2a_62=0 and SOURCE_DEMDXL2a_62="V5") and AD8 score not present:
If SISFAILURECAT=2 then DEMDXL2b_62=1
If SISFAILURECAT=0 then DEMDXL2b_62=0
If SISFAILURECAT=1 or missing and DEMDXL2a_62=0 then DEMDXL2b_62=0
Else DEMDXL2b_62=missing

Source variable(s): DEMDXL2a_62, SOURCE_DEMDXL2a_62, AD8FAILURE, AD8FAILUREDATE, SISFAILURECAT, SISFAILUREDATE

6.8 DATE_DEMDXL2b_62 (Date for dementia diagnosis level 2b)

Description: Date of diagnosis when the value of DEMDXL2b_62=1 or the last date of assessment when DEMDXL2b_62=0. When DEMDXL2b_62=NULL then the date will also be missing. Recall that the level 2b dementia variable will take on the level 2a value when it exists (except in some cases where the source was V5). The same is true for the level 2b date value. For those PPTs with a dementia diagnosis, the diagnosis date assigned will either be the date of the earliest hospitalization date with a dementia code, the V5 NCS exam date, the V6 NCS exam date, the TICS/proxy interview date if level 2a is non-missing, the date the AD8 was executed, or the date the SIS was executed.

Type: Date

Algorithm: If DEMDXL2b_62 = missing then DATE_DEMDXL2b_62 = missing.

If DEMDXL2a_62=1 or (DEMDXL2a_62=0 and SOURCE_DEMDXL2a_62="V6") then DATE_DEMDXL2b_62 = DATE_DEMDXL2a_62

Else if missing DEMDXL2a_62 or (DEMDXL2a_62=0 and SOURCE_DEMDXL2a_62="V5"):

If AD8FAILURE=1 then DATE_DEMDXL2b_62= minimum value of AD8FAILUREDATE and DEMENTEDCEL61_DATE
 Else if AD8FAILURE=0 and SISFAILURECAT=2 and SISFAILUREDATE after AD8FAILUREDATE then DATE_DEMDXL2b_62= minimum value of SISFAILUREDATE and DEMENTEDCEL61_DATE
 Else if AD8FAILURE=0 then DATE_DEMDXL2b_62= AD8FAILUREDATE
 Else if AD8FAILURE=NULL and SISFAILURECAT=2 then DATE_DEMDXL2b_62= minimum value of SISFAILUREDATE and DEMENTEDCEL61_DATE
 Else if AD8FAILURE=NULL and SISFAILURECAT=0 then DATE_DEMDXL2b_62= SISFAILUREDATE
 Else if AD8FAILURE=NULL and SISFAILURECAT= 1 or missing and DEMDXL2a_62=0 then DATE_DEMDXL2b_62= DATE_DEMDXL2a_62

Source variable(s): DEMDXL2a_62, SOURCE_DEMDXL2a_62, DATE_DEMDXL2a_62, AD8FAILURE, AD8FAILUREDATE, DEMENTEDCEL61_DATE, SISFAILURECAT, SISFAILUREDATE

6.9 SOURCE_DEMDXL2b_62 (Diagnosis and date source for DATE_DEMDXL2b_62)

Description: Source variable created to indicate the diagnosis and data source for DATE_DEMDXL2b_62

Type: Character

Algorithm: If DEMDXL2b_62 = missing then SOURCE_DEMDXL2b_62 should be set to missing

If DEMDXL2a_62=1 or (DEMDXL2a_62=0 and SOURCE_DEMDXL2a_62="V6") then SOURCE_DEMDXL2b_62 = SOURCE_DEMDXL2a_62

Else if missing DEMDXL2a_62 or (DEMDXL2a_62=0 and SOURCE_DEMDXL2a_62="V5"):

If AD8FAILURE=1 then SOURCE_DEMDXL2b_62="AD8+HOSP" if DATE_DEMDXL2b_62=DEMENTEDCEL61_DATE OR SOURCE_DEMDXL2b_62="AD8" if DATE_DEMDXL2b_62= AD8FAILUREDATE

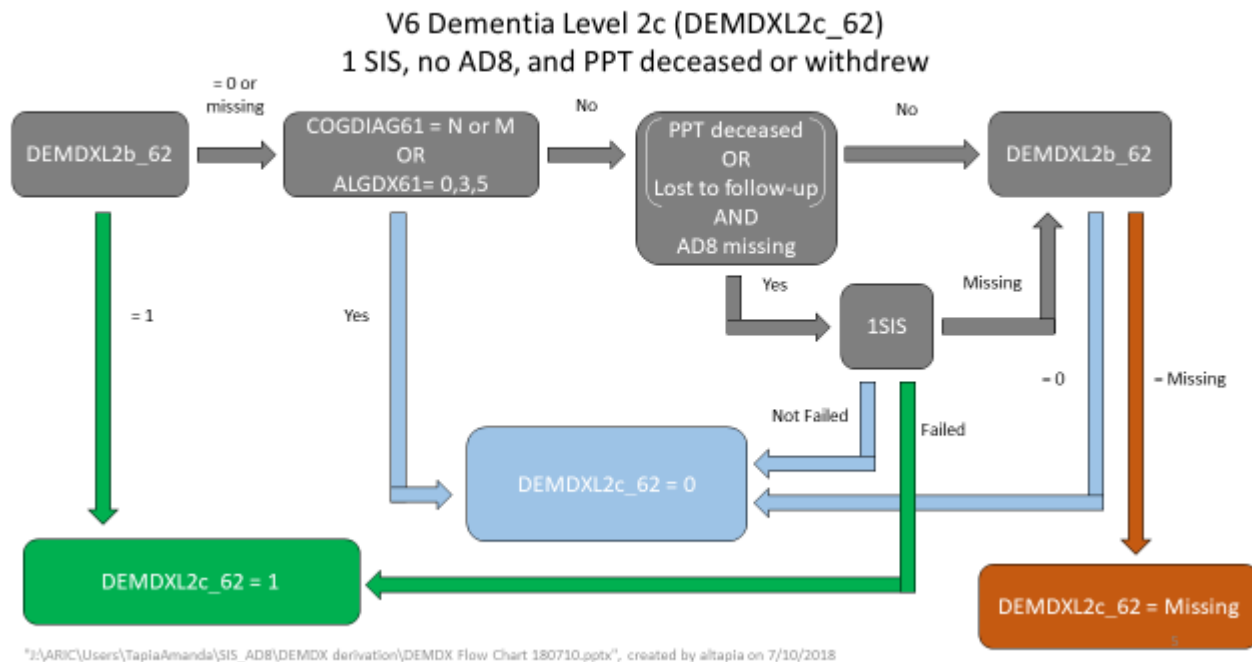
Else if AD8FAILURE=0 and SISFAILURECAT=2 and SISFAILUREDATE after AD8FAILUREDATE then SOURCE_DEMDXL2b_62="2SIS+HOSP" if

DATE_DEMDXL2b_62=DEMENTEDCEL61_DATE OR
 SOURCE_DEMDXL2b_62="2SIS" if DATE_DEMDXL2b_62=
 SISFAILUREDATE
 Else if AD8FAILURE=0 then SOURCE_DEMDXL2b_62= "AD8"
 Else if AD8FAILURE=NULL and SISFAILURECAT=2 then
 SOURCE_DEMDXL2b_62="2SIS+HOSP" if
 DATE_DEMDXL2b_62= DEMENTEDCEL61_DATE OR
 SOURCE_DEMDXL2b_62="2SIS" if DATE_DEMDXL2b_62=
 SISFAILUREDATE
 Else if AD8FAILURE=NULL and SISFAILURECAT=0 then
 SOURCE_DEMDXL2b_62="2SIS"
 Else if AD8FAILURE=NULL and SISFAILURECAT= 1 or missing and
 DEMDXL2a_62=0 then SOURCE_DEMDXL2b_62=
 SOURCE_DEMDXL2a_62

Source variable(s): DEMDXL2a_62, SOURCE_DEMDXL2a_62, DATE_DEMDXL2a_62,
 AD8FAILURE, AD8FAILUREDATE, SISFAILURECAT,
 SISFAILUREDATE, DEMENTEDCEL61_DATE

Level 2c

For those PPTs who declined to be seen in person at V6 or were lost to follow up or deceased as of the end of V6 (31DEC2017), dementia was determined using a single prorated SIS score (Six Item Screener). The level 2b dementia diagnosis variable, **DEMDXL2c_62**, is equal to **DEMDXL2b_62** when the level 2b variable is non-missing (except in some cases where the source of **DEMDXL2b_62** is V5 and **DEMDXL1_51=0**). If level 2b was not present, an AD8 score was not available, and the PPT was lost to follow up or deceased as of 31DEC2017, then the value assigned was based on the single prorated SIS score.



6.10 DEMDXL2c_62 (Dementia diagnosis level 2c)

Description: Indicator variable for dementia based on reviewer diagnosis, algorithmic syndromic diagnosis, failed AD8 (AD8 Dementia Screening Interview), two failed SIS (Six Item Screener), and one failed SIS when PPTs are lost to follow up or deceased. Diagnoses are prioritized, with the reviewer diagnosis being given highest priority, then the algorithmic syndromic diagnosis, AD8, and finally the SIS.

Format: 0=No, 1=Yes.

Type: Numeric

Algorithm: For PPTs with **DEMDXL2b_62=1** or (**DEMDXL2b_62=0** and **SOURCE_DEMDXL2b_62 ≠ "V5"**):

DEMDXL2c_62=DEMDXL2b_62

For PPTs with DEMDXL2b_62=NULL or (DEMDXL2b_62=0 and SOURCE_DEMDXL2b_62 = "V5"):

If SISFAILURECAT=1 and AD8FAILURE=NULL AND (NULL<DTHDATE<=31DEC2017 OR (ICT1=0 AND NULL<ICT0a<=31DEC2017)) then DEMDXL2c_62=1
Else if DEMDXL2b_62=0 then DEMDXL2c_62=0

Source variable(s): DEMDXL2b_62, SOURCE_DEMDXL2b_62, SISFAILURECAT, AD8FAILURE, DTHDATE, ICT1, ICT0a

6.11 DATE_DEMDXL2c_62 (Date for dementia diagnosis level 2c)

Description: Date of diagnosis when the value of DEMDXL2c_62=1 or the last date of assessment when DEMDXL2c_62=0. When DEMDXL2c_62=NULL then the date will also be missing. Recall that the level 2c dementia variable will take on the level 2b value when it exists (except in some cases where the source was V5). The same is true for the level 2c date value. For those PPTs with a dementia diagnosis, the diagnosis date assigned will either be the date of the earliest hospitalization date with a dementia code, the V5 NCS exam date, the V6 exam date, the date of AD8 failure, or the date of the second failed SIS if level 2b is non-missing (except in some cases where SOURCE_DEMDXL2b_62="V5"). For PPTs who are lost to follow up or deceased with one failed SIS, the diagnosis date will be the earliest hospitalization date, the death date with a dementia code, or the date the SIS was executed.

Type: Date

Algorithm: If DEMDXL2c_62 = missing then DATE_DEMDXL2c_62 should be set to missing.

For PPTs with DEMDXL2b_62=1 or (DEMDXL2b_62=0 and SOURCE_DEMDXL2b_62 ≠ "V5"):
DATE_DEMDXL2c_62=DATE_DEMDXL2b_62

For PPTs with DEMDXL2b_62=NULL or (DEMDXL2b_62=0 and SOURCE_DEMDXL2b_62 = "V5"):
If SISFAILURECAT=1 and AD8FAILURE=NULL AND (NULL<DTHDATE<=31DEC2017 OR (ICT1=0 AND NULL<ICT0a<=31DEC2017)) then DATE_DEMDXL2c_62= minimum value of SISFAILUREDATE, DEMENTEDCEL61_DATE, and DEMENTEDDTH61_DATE

Else if DEMDXL2b_62=0 then
DATE_DEMDXL2c_62=DATE_DEMDXL2b_62

Source variable(s): DEMDXL2c_62, DEMDXL2b_62, SOURCE_DEMDXL2b_62,
DATE_DEMDXL2b_62, SISFAILURECAT, AD8FAILURE, DTHDATE,
ICT1, ICT0a, SISFAILUREDATE, DEMENTEDCEL61_DATE,
DEMENTEDDTH61_DATE

6.12 SOURCE_DEMDXL2c_62 (Diagnosis and date source for DATE_DEMDXL2c_62)

Description: Source variable created to indicate the diagnosis and data source for
DATE_DEMDXL2c_62

Type: Character

Algorithm: If DEMDXL2c_62 = missing then SOURCE_DEMDXL2c_62 should be
set to missing.

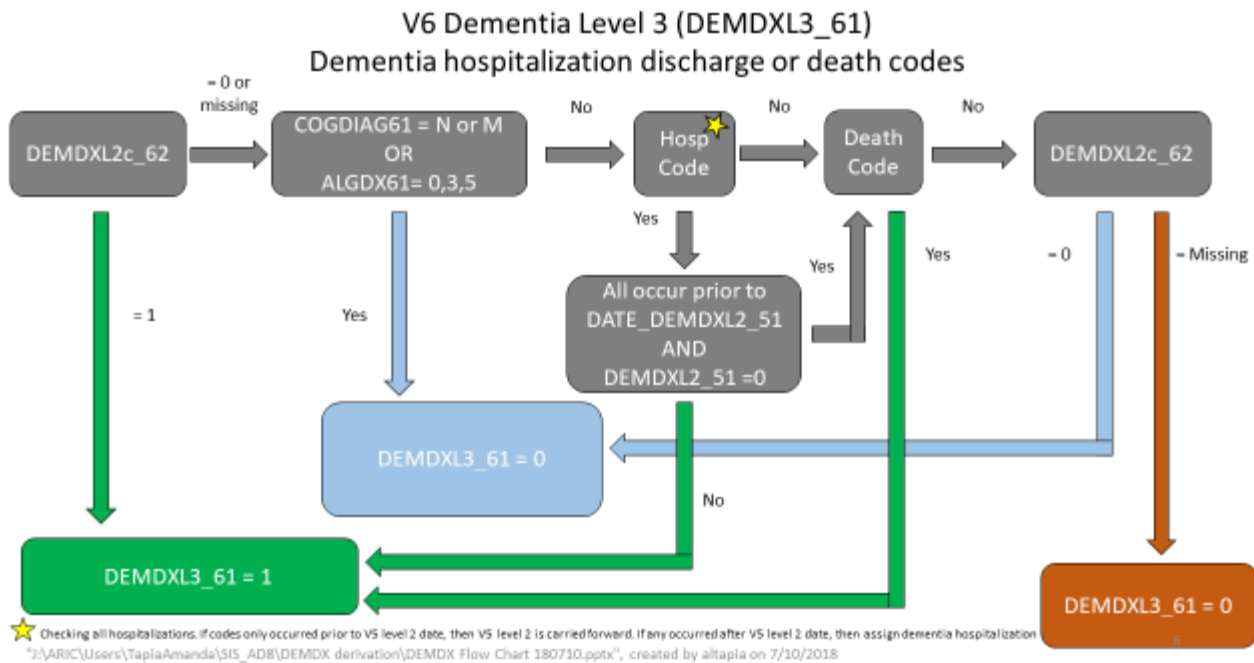
For PPTs with DEMDXL2b_62=1 or (DEMDXL2b_62=0 and
SOURCE_DEMDXL2b_62 ≠ "V5"):
SOURCE_DEMDXL2c_62= SOURCE_DEMDXL2b_62

For PPTs with DEMDXL2b_62=NULL or (DEMDXL2b_62=0 and
SOURCE_DEMDXL2b_62 = "V5"):
If SISFAILURECAT=1 and AD8FAILURE=NULL AND
(NULL<DTHDATE<=31DEC2017 OR (ICT1=0 AND
NULL<ICT0a<=31DEC2017)) then SOURCE_DEMDXL2c_62= "1SIS"
if DATE_DEMDXL2c_62=SISFAILUREDATE
OR ="1SIS+HOSP" if
DATE_DEMDXL2c_62=DEMENTEDCEL61_DATE
OR ="1SIS+DTH" if
DATE_DEMDXL2c_62=DEMENTEDDTH61_DATE
Else if DEMDXL2b_62=0 then
SOURCE_DEMDXL2c_62=SOURCE_DEMDXL2b_62

Source variable(s): DEMDXL2c_62, DEMDXL2b_62, SOURCE_DEMDXL2b_62,
SISFAILURECAT, AD8FAILURE, DTHDATE, ICT1, ICT0a,
DATE_DEMDXL2c_62

Level 3

Dementia hospitalization discharge codes and diagnostic codes from death certificates were used to assess dementia for the PPTs who had no V5 or V6 NCS assessments and no AD8 or SIS interviews. Level 3 dementia diagnosis, **DEMDXL3_61**, is assigned as the level 1 diagnosis when available, the level 2a diagnosis when available, the level 2b diagnosis when available, or the level2c when available (except in some cases where the source of a leveled dementia diagnosis was V5 and DEMDXL1_51=0); dementia hospitalization codes are then considered followed by dementia codes found on the death certificate.



6.13 DEMDXL3_61 (Dementia diagnosis level 3)

Description:

Indicator variable for dementia based on reviewer diagnosis, algorithmic syndromic diagnosis, AD8 (AD8 Dementia Screening Interview), SIS (Six Item Screener), dementia codes on the cohort eligibility form (CELB), and dementia codes on the death certificate form (DTH). Diagnoses are prioritized, with the reviewer diagnosis being given highest priority, then the algorithmic syndromic diagnosis, AD8, SIS, CELB dementia codes, and finally the DTH form.

Format:

0=No, 1=Yes.

Type:

Numeric

Algorithm:

For PPTs with DEMDXL2c_62=1 or (DEMDXL2c_62=0 AND SOURCE_DEMDXL2c_62 ≠ "V5"):

DEMDXL3_61=DEMDXL2c_62

For PPTs with DEMDXL2c_62=NULL or (DEMDXL2c_62=0 AND SOURCE_DEMDXL2c_62 = "V5"):

If DEMENTEDCEL61=1 or DEMENTEDDTH61=1 and the hospitalization/death occurred before '31DEC2017', then DEMDXL3_61=1

Else if DEMDXL2c_62=0 then DEMDXL3_61=0

Otherwise DEMDXL3_61=0

Source variable(s): DEMDXL2c_62, SOURCE_DEMDXL2c_62, DEMENTEDCEL61, DEMENTEDDTH61

6.14 DATE_DEMDXL3_61 (Date for dementia diagnosis level 3)

Description: Date of diagnosis when the value of DEMDXL3_61=1 or the last date of assessment when DEMDXL3_61=0. When DEMDXL3_61=0 and DEMDXL2c_62 is missing then the date will also be missing. Recall that the level 3 dementia variable will take on the level 2c value when it exists (except in some cases where the source is V5). The same is true for the level 3 date value. For those PPTs with a dementia diagnosis, the diagnosis date assigned will either be the date of the earliest hospitalization date with a dementia code, date of death for PPTs with a dementia death code, V5 NCS exam date, V6 exam date, TICS or RDS date, AD8 date, or SIS date if level 2c is non-missing.

Type: Date

Algorithm: For PPTs with DEMDXL2c_62=1 or (DEMDXL2c_62=0 AND SOURCE_DEMDXL2c_62 ≠ "V5"):
DATE_DEMDXL3_61=DATE_DEMDXL2c_62

For PPTs with DEMDXL2c_62=NULL or (DEMDXL2c_62=0 AND SOURCE_DEMDXL2c_62 = "V5"):

If DEMENTEDCEL61=1 or DEMENTEDDTH61=1 and the hospitalization/death occurred before '31DEC2017', then DATE_DEMDXL3_61 = the minimum value of DEMENTEDCEL61_DATE and DEMENTEDDTH61_DATE
Else if DEMDXL2c_62=0 then DATE_DEMDXL3_61=DATE_DEMDXL2c_62

Otherwise DATE_DEMDXL3_61=NULL

Source variable(s): DEMDXL2c_62, SOURCE_DEMDXL2c_62, DATE_DEMDXL2c_62, DEMENTEDCEL61, DEMENTEDDTH61, DEMENTEDCEL61_DATE, DEMENTEDDTH61_DATE

6.15 SOURCE_DEMDXL3_61 (Diagnosis and date source for DATE_DEMDXL3_61)

Description: Source variable created to indicate the diagnosis and data source for DATE_DEMDXL3_61. The diagnosis source and diagnosis date for DEMDXL3_61 is best displayed in a table, shown at the bottom of this block.

Type: Character

Algorithm: For PPTs with DEMDXL2c_62=1 or (DEMDXL2c_62=0 AND SOURCE_DEMDXL2c_62 ≠ "V5"):
SOURCE_DEMDXL3_61=SOURCE_DEMDXL2c_62

For PPTs with DEMDXL2c_62=NULL or (DEMDXL2c_62=0 AND SOURCE_DEMDXL2c_62 = "V5"):

If DEMENTEDCEL61=1 AND the hospitalization occurred before 31DEC2017 then SOURCE_DEMDXL3_61='HOSP'
Else if DEMENTEDDTH61=1 and the death occurred before '31DEC2017' then SOURCE_DEMDXL3_61 = 'DTH'
Else if DEMDXL2c_62=0 then SOURCE_DEMDXL3_61= SOURCE_DEMDXL2c_62 (See table below for more granular assignments for SOURCE_DEMDXL3_61.)

Otherwise SOURCE_DEMDXL3_61='NO CODE'

Source variable(s): DEMDXL2c_62, SOURCE_DEMDXL2c_62, DEMENTEDCEL61, DEMENTEDDTH61

SOURCE_DEMDXL3_61 - Diagnosis and date source for DATE_DEMDXL3_61		
Source code	Source of the diagnosis	Date of the diagnosis
1SIS	1 SIS	SIS
1SIS+HOSP	1 SIS	Hospitalization discharge
2SIS	2 SIS	SIS
2SIS+HOSP	2 SIS	Hospitalization discharge
AD8	AD8	AD8
AD8+DOD	AD8	Date of death (from STATUS61)
AD8+HOSP	AD8	Hospitalization discharge
DTH	Dementia death code	Dementia death code

DTH+DOD	Dementia death code	Date of death (from STATUS61)
HOSP	Dementia hospitalization code	Hospitalization discharge
HOSP+DOD	Dementia hospitalization code	Date of death (from STATUS61)
NO CODE	No available information	NULL
RDS Dead	RDS Dead	RDS Dead
RDS Live	RDS Live	RDS Live
RDS Live+DOD	RDS Live	Date of death (from STATUS61)
RDS+DTH	RDS	Dementia death code
RDS+DTH+DOD	RDS	Date of death (from STATUS61)
RDS+HOSP	RDS	Hospitalization discharge
TICS	TICS	TICS
TICS+HOSP	TICS	Hospitalization discharge
V5	V5 NCS exam	V5 visit
V5+HOSP	V5 NCS exam	Hospitalization discharge
V6	V6 NCS exam	V6 visit
V6+HOSP	V6 NCS exam	Hospitalization discharge
V6+RDS Live	V6 NCS exam, RDS Live	RDS
V6+RDS+HOSP	V6 NCS exam, RDS	Hospitalization discharge
V6+TICS	V6 NCS exam, TICS	TICS

SIS = Six Item Screener, AD8 = AD8 Dementia Screening Interview, RDS = Retrospective dementia surveillance, TICS = Telephone Interview for Cognitive Status

7. SURVIVAL ANALYSIS VARIABLES

Dementia survival analysis variables are based primarily on the Level 3 dementia diagnosis variable (see Leveled Dementia Diagnoses section). The variables described in this section are designed to be used for analysis of time to Level 3 Dementia.

CENSDAT7, used in some definitions in this section, is a surveillance variable created by the Coordinating Center for use in survival analyses where the endpoint is anything other than death. CENSDAT7 is found in the dataset INC_BY17; a description of CENSDAT7 is found in the derived variable dictionary for INC_BY17.

7.1 DEMDXL3CENS_61 (Censored level 3 dementia diagnosis)

Censored level 3 dementia diagnosis is level 3 dementia diagnosis (DEMDXL3_61), excluding discharge or death certificate codes that occurred after the date of last visit/phone contact in which hospitalization information was collected for PPTs lost to follow-up (CENSDAT7). There are no missing values for censored level 3 dementia diagnosis: lost to follow-up PPTs with a hospital or death code occurring after lost to follow-up and before January 1, 2018 are set to 0 (no dementia).

NOTE: For survival analysis of time-to-dementia, use this variable as the censoring variable with the event/censoring date variable, **COXDATE_DEMDXL3_61**, defined below.

Format: 0=No, 1=Yes

Algorithm: For PPTs with DEMDXL2c_62=1 or (DEMDXL2c_62=0 and DEMDXL3_61=0):
DEMDXL3CENS_61 = DEMDXL2c_62

Else for PPTs with non-missing DATE_DEMDXL3_61 and
DATE_DEMDXL3_61 ≤ CENSDAT7:
DEMDXL3CENS_61 = DEMDXL3_61

Else:
DEMDXL3CENS_61 = 0

Type: Numeric

Source variable(s): DEMDXL2c_62, DEMDXL3_61, DATE_DEMDXL3_61, CENSDAT7 (INCBY17 data set)

7.2 DATE_DEMDXL3CENS_61 (Date for censored level 3 dementia diagnosis)

Date of censored level 3 dementia diagnosis is the earliest date indicated from Visit 5, Visit 6, TICS/proxy interview, AD8, SIS, hospital discharge code or death code. For PPTs with DEMDXL3CENS_61 = Yes, it is the earliest date that dementia criteria were met from Visit

5, Visit 6, TICS/proxy interview, AD8, SIS, hospital discharge code or death code. For PPTs with DEMDXL3CENS_61 = No, it is the date of Visit 5, Visit 6, TICS/proxy interview, AD8, or SIS. For PPTs who died, were lost to follow-up, or refused, it is the ARIC censoring date (CENSDAT7, if prior to January 1, 2018); otherwise the date is set to December 31, 2017.

NOTE: This variable is programmed as an interim step and should not be used for analysis.

Algorithm: For PPTs with [DEMDXL2c_62=1 or (DEMDXL2c_62=0 AND DEMDXL3_61=0)] and non-missing DATE_DEMDXL2c_62:
DATE_DEMDXL3CENS_61 = DATE_DEMDXL2c_62

Else for PPTs with [DEMDXL2c_62=1 or (DEMDXL2c_62=0 AND DEMDXL3_61=0)] and missing DATE_DEMDXL2c_62:
DATE_DEMDXL3CENS_61 = '31DEC2017'

Else for PPTs with non-missing DATE_DEMDXL3_61 and
DATE_DEMDXL3_61 ≤ CENSDAT7:
DATE_DEMDXL3CENS_61 = DATE_DEMDXL3_61

Else:
DATE_DEMDXL3CENS_61 = CENSDAT7

Type: Date

Source variable(s): DEMDXL2c_62, DEMDXL3_61, DATE_DEMDXL2c_62, DATE_DEMDXL3_61, CENSDAT7

7.4 COXDATE_DEMDXL3_61 (Adjusted date of censored level 3 dementia diagnosis)

Date of censored level 3 dementia diagnosis (DATE_DEMDXL3CENS_61) adjusted for data collected from proxy interview, AD8 occurring after death, hospital discharge code, or death code. Subtracting 180 days from DATE_DEMDXL3CENS_61 assumes that the dementia started midpoint within a year prior to the date.

NOTE: For survival analysis of time-to-dementia, use this variable as the event/censoring date, along with the censoring variable **DEMDXLCENS_61** defined above.

Algorithm: For participants with SOURCE_DEMDXL3_61 in ("1SIS+HOSP", "2SIS+HOSP", "AD8+DOD", "AD8+HOSP", "DTH", "DTH+DOD", "HOSP", "HOSP+DOD", "RDS Dead", "RDS Live", "RDS Live+DOD", "RDS+DTH",

“RDS+DTH+DOD”, “RDS+HOSP”, “TICS+HOSP”, “V5+HOSP”, “V6+HOSP”,
“V6+RDS Live”, “V6+RDS+HOSP”):
COXDATE_DEMDXL3_61 = DATE_DEMDXL3CENS_61 – 180

Else:

COXDATE_DEMDXL3_61 = DATE_DEMDXL3CENS_61

Type: Date

Source variable(s): SOURCE_DEMDXL3_61, DATE_DEMDXL3CENS_61

7.6 DEMDXL3_EXCL_LTFU_61 (Level 3 Dementia Diagnosis excluding PPTs who are lost to follow-up and had a dementia code after lost to follow-up)

DEMDXL3_EXCL_LTFU_61 is the same as the censored level 3 dementia diagnosis (DEMDXL3CENS_61) except that here, lost to follow up PPTs with a hospitalization or death code after lost to follow up and before January 1, 2018 are set to missing. These PPTs are excluded in analyses of incident level 3 dementia because events for lost to follow-up PPTs cannot be systematically identified.

NOTE: Use this variable for analysis of **incident** level 3 dementia (such analysis is discouraged in favor of time-to-dementia analysis).

Format: 0=No, 1=Yes, NULL=Lost to follow up

Algorithm: For PPTs with DATE_DEMDXL3_61 after CENSDAT7 and [missing DEMDXL2c_62 OR (DEMDXL2c_62=0 AND DEMDXL3_61=1)]:
DEMDXL3_EXCL_LTFU_61 = NULL

Else:

DEMDXL3_EXCL_LTFU_61 = DEMDXL3_61

Type: Numeric

Source variable(s): DATE_DEMDXL3_61, CENSDAT7, DEMDXL2c_62, DEMDXL3_61

APPENDIX A: LEVELED DEMENTIA INTERMEDIATE VARIABLES

Appendix A provides the descriptions and algorithms for the intermediate, temporary variables used to derive the leveled dementia variables (level 3) in Section 6. These include variables from the Six Item Screener (SIS) and AD8 Dementia Screening Interview (ADS) from annual and semi-annual follow up as well as hospital discharge diagnosis and procedure codes (Cohort Event Eligibility form, CELB) and death codes (Death Certificate form, DTHA) from community surveillance.

A1. DEATH AND HOSPITALIZATION CODES

A1.1 DEMENTEDCEL61 (Dementia codes in CEL)

Description: Indicator for the presence of ICD-9 or ICD-10 Dementia Hospitalization Code on the Cohort Event Eligibility form. Although a single participant may have multiple records with a dementia hospitalization code, DEMENTEDCEL61 is a one-record-per-SUBJECTID indicator for the presence of any dementia hospitalization code.

Type: numeric

Algorithm:

DEMENTEDCEL61	Description
1	if any of the CEL10* variables contains an ICD code from the following list: 290, 294.0, 294.1, 294.2, 294.9, 331.8, 331.82, 331.89', 331.0, 331.1, 331.2, 331.7, 331.9, F04, F06.8, G94, G31.9, G31.83, G31.89, F01, F01.5, F01.50, F01.51, F02, F02.8, F02.80, F02.81, F03, F03.9, F03.90, F03.91, G30, G30.0, G30.1, G30.8, G30.9, G31.0, G31.01, G31.09, G31.1, G31.83, R41, R41.81, R41.84, R41.89, R41.9 AND CELB04 is non-missing and occurs on or before 31DEC2017 *a-z, a1-z1, a2-z2, or a3-z3
NULL	Otherwise

Related variable(s): CELB10a-CELB10z, CELB10a1-CELB10z1, CELB10a2-CELB10z2, CELB10a3-CELB10z3, CELB04

A1.2 DEMENTEDCEL61_DATE1-DEMENTEDCEL61_DATE# (Date of the occurrence of a CEL with dementia code)

Description: Date variables that correspond to the date of discharge (CELB04) among CEL Cohort Event Eligibility records by participant; where the codes contain a dementia hospitalization code. Since participants may have multiple records with a dementia hospitalization code, DEMENTEDCEL61_DATE1 denotes the first instance, DEMENTEDCEL61_DATE2 denotes the second instance, etc. If no dementia hospitalization is found for a participant, then all DEMENTEDCEL61_DATE# variables are missing.

Type: date

Algorithm:

DEMENTEDCEL61_DATE#	Description
CELB04	If DEMENTEDCEL61=1 then DEMENTEDCEL61_DATE# is the date of discharge for each of the instances in which a dementia hospitalization code was identified.
NULL	Otherwise

Related variable(s): DEMENTEDCEL61, CELB04

A1.3 DEMENTEDDTH61 (Dementia codes in DTH)

Description: Indicator for the presence of ICD-9 or ICD-10 Dementia Code on the Death Certificate Form (1=Yes, 0=No). Although a single participant may have multiple records with a death code, DEMENTEDDTH61 is a one-record-per-SUBJECTID indicator for the presence of any dementia death code. DEMENTEDDTH61=1 denotes the first occurrence of any dementia death code, and DEMENTEDDTH61=0 denotes that no dementia death code was identified.

Type: numeric

Algorithm:

DEMENTEDDTH61	Description
1	if any of DTHA19a-DTHA19j contains any one of the ICD codes from the following list:

	290, 294.0, 294.1, 294.2, 294.9, 331.8, 331.82, 331.89, 331.0, 331.1, 331.2, 331.7, 331.9, F04, F06.8, G94, G31.9, G31.83, G31.89, F01, F01.5, F01.50, F01.51, F02, F02.8, F02.80, F02.81, F03, F03.9, F03.90, F03.91, G30, G30.0, G30.1, G30.8, G30.9, G31.0, G31.01, G31.09, G31.1, G31.83, R41, R41.81, R41.84, R41.89, R41.9 AND DTHA09 is non-missing and occurs on or before 31DEC2017
0	Otherwise

Related variable(s): DTHA19a through DTHA19j, DTHa09

A1.4 DEMENTEDDTH61_DATE (Date of death for PPT with a dementia death code)

Description: Date variable that corresponds to the death date for the participant when a dementia code is found on the death record. Although a single participant may have multiple records with a death code, DEMENTEDDTH61_DATE denotes the first occurrence of a dementia death code.

Type: date

Algorithm:

DEMENTEDDTH61_DATE	Description
DTHA09	If DEMENTEDDTH61=1 then the corresponding date is the date of death
NULL	Otherwise

Related variable(s): DEMENTEDDTH61, DTHA09

A1.5 DEMENTEDCEL61_DATE_COND (DEMENTEDCEL61_DATE conditional on dementia information available at V5)

Description: Date variable that corresponds to the date of discharge (CELB04) among CEL Cohort Event Eligibility records by participant; where the codes contain a dementia hospitalization code, conditional on dementia information available at V5 (DEMDXL2_51). This variable summarizes the DEMENTEDCEL61_DATE1 through DEMENTEDCEL61_DATE# variables above, based on the timing of available V5 level 2 dementia information.

DEMENTEDCEL61_DATE_COND is the first instance of a hospitalization code (DEMENTEDCEL61_DATE1) if there is no V5 information OR all hospitalization codes occur after V5 OR all hospitalization codes occur before V5. If V5 information is available between hospitalization dates, then DEMENTEDCEL61_DATE_COND is the first date after the V5 date (or after 01SEP2013 if V5 date is missing).

Type: Date

Algorithm:

DEMENTEDCEL61_DATE_COND	Description
DEMENTEDCEL61_DATE1	If dementia codes are in CEL AND there is no dementia information available at level 2 at V5 OR all dementia hospitalization codes occur before V5 level 2 information OR all dementia hospitalization codes occur after V5 level 2 information
DEMENTEDCEL61_DATE2 – DEMENTEDCEL61_DATE#	If dementia codes are in CEL AND Dementia information at V5 level 2 occurs between dates of hospitalization codes then it's the first hospitalization date occurring after V5 level 2 date (or after 01SEP2013 if V5 date is missing).
NULL	Otherwise

Related Variable(s): DEMENTEDCEL61, DATE_DEMDXL2_51, DEMDXL2_51, DEMENTEDCEL61_DATE1-DEMENTEDCEL61_DATE#

A2. ADS VARIABLES (MULTIPLE RECORDS PER PPT)

A2.1 ADSLEADRESP (Number of responses (Yes or No) to lead in questions)

Description: The number of responses to the lead in questions on the ADS form.
Note: ADS lead in questions refers to variables ADS3 ADS4 ADS5 ADS6 ADS7 ADS8 ADS9 ADS10.

Type: numeric

Algorithm:

ADSLeadResp	Description
-------------	-------------

1-8	Count of “Y” or “N” responses to ADS lead in questions. ADSLeadResp=1 if only one question was answered, ADSLeadResp=2 if two questions were answered, etc.
0	If there are no responses (missing) to ADS lead in questions

Related variable(s): ads3 ads4 ads5 ads6 ads7 ads8 ads9 ads10

A2.2 ADSLEADY (Number of Yes responses to lead in questions)

Description: The number of “Yes” responses given to lead in questions on the ADS form.
 Note: ADS lead in questions refers to variables ADS3 ADS4 ADS5 ADS6 ADS7 ADS8 ADS9 ADS10.

Type: numeric

Algorithm:

ADSLeadY	Description
1-8	Count of “Y” responses to ADS lead in questions. ADSLeadY=1 if only one response was “Y”, ADSLeadY=2 if two responses were “Y”, etc.
0	If there are no “Y” responses to ADS lead in questions

Related variable(s): ads3 ads4 ads5 ads6 ads7 ads8 ads9 ads10

A2.3 ADSLEADN (Number of ‘No’ responses to lead in questions)

Description: The number of “No” responses given to lead in questions on the ADS form.
 Note: ADS lead in questions refers to variables ADS3 ADS4 ADS5 ADS6 ADS7 ADS8 ADS9 ADS10.

Type: numeric

Algorithm:

ADSLeadN	Description
1-8	Count of “N” responses to ADS lead in questions. ADSLeadN=1 if only one response was “N”, ADSLeadN=2 if two responses were “N”, etc.
0	If there are no “N” responses to ADS lead in questions

Related variable(s): ads3 ads4 ads5 ads6 ads7 ads8 ads9 ads10

A2.4 ADSSUBRESP (Number of responses (Yes or No) to sub questions)

Description: The number of responses to the sub questions on the ADS form.
Note: ADS sub questions refers to variables ADS3a ADS4a ADS5a ADS6a ADS7a ADS8a ADS9a ADS10a.

Type: numeric

Algorithm:

ADSSubResp	Description
1-8	Count of "Y" or "N" responses to ADS sub questions. ADSSubResp=1 if only one sub question was answered, ADSSubResp=2 if two sub questions were answered, etc.
0	If there are no responses (missing) to ADS sub questions

Related variable(s): ads3a ads4a ads5a ads6a ads7a ads8a ads9a ads10a;

A2.5 AD8aScore (Number of 'Yes' responses to sub questions (AD8 Score), conditional on the expected number of responses)

Description: AD8 Score is the number of "Yes" responses to sub questions following "Yes" responses to lead in questions. The number of 'Yes' responses to lead in questions is equivalent to the number of expected responses to sub questions. An AD8 score is only calculated if the participant responds (Yes or No) to at least 3 lead in questions AND 50% or more of the expected number of sub questions are answered OR if fewer than 50% of the expected number of sub questions are answered then 50% or more of responses to lead in questions should be 'No'.

Type: numeric

Algorithm:

AD8aScore	Description
1-8	Count of "Y" responses to ADS sub questions if there are three or more responses to lead in questions AND: 1) There is a sub question response for half or more of the "Y" responses to lead in questions OR

	2) If there are sub question responses for less than half of the "Y" responses to lead in questions, but "N" responses make up half or more of the lead in questions
0	There are no "Y" responses to ADS sub questions if there are three or more responses to lead in questions AND: 1) There is a sub question response for half or more of the "Y" responses to lead in questions OR 2) If there are sub question responses for less than half of the "Y" responses to lead in questions, but "N" responses make up half or more of the lead in questions
NULL	Otherwise

Related variable(s): ads3a ads4a ads5a ads6a ads7a ads8a ads9a ads10a

A2.6 AD8Failure (AD8 failure (score >= 2))

Description: Indicator variable for AD8 failure, defined as an AD8 score >= 2.

Type: numeric

Algorithm: _____

AD8Failure	Description
1	If AD8 Score is 2 or greater then AD8 is failed
0	If AD8 Score is non-missing and less than 2 then AD8 is not failed
NULL	If AD8 score is missing

Related variable(s): ad8ascore

A3. ADS VARIABLES (ONE RECORD PER PPT)

A3.1 AD8FAILURE (Any failed AD8 (score >=2) among those attempted)

Description: Since a single participant may have multiple AD8 evaluations, this AD8FAILURE variable differs from that in the above section. This variable is a one-record-per-participant indicator variable for any AD8 failure (i.e. one or more AD8 failures among those attempted). Failure is defined as an AD8 score >= 2.

Type: numeric

Algorithm:

AD8Failure	Description
1	If there are one or more AD8 Score(s) of 2 or greater
0	If there are no failed AD8s (all non-missing scores are less than 2)
NULL	All AD8 scores are missing

Related variable(s): AD8FAILURE1-AD8FAILURE#

A3.2 AD8FAILUREDATE (Date of first AD8 failed or last observed not failed)

Description: Date variable that corresponds to the earliest date the AD8 was failed or the date of the last AD8 that was not failed.

Type: Date

Algorithm:

AD8FailureDate	Description
ADS0a	If AD8Failure=1 then AD8FAILUREDATE is the earliest ADS date at which the first failure occurred
ADS0a	If AD8Failure=0 then AD8FAILUREDATE is the latest ADS date at which the last observed AD8 was not failed
.	If AD8Failure is missing

If AD8Failure=1 then AD8FAILUREDATE= the earliest ADS0a at which the first failure occurred.

If AD8FAILURE=0 then AD8FAILUREDATE= the latest ADS0a at which the last observed AD8 was not failed.

Related Variable(s): AD8Failure, ADS0a

A4. SIS VARIABLES (MULTIPLE RECORDS PER PPT)

A4.1 SISAttempt (SIS sum of attempted (Correct=C or Incorrect=I) responses)

Description: Number of attempted responses to the Six Item Screener questions SIS3, SIS4, SIS5, SIS6, SIS7, and SIS8. Responses that are correct (C) or incorrect (I) are counted as attempted.

Type: numeric

Algorithm:

SISAttempt	Description
1-6	Count of attempted responses "C" or "I" to SIS questions. SISAttempt=1 if only one question had a response, SISAttempt=2 if two questions have a response, etc.
0	If there are no attempted responses to SIS questions

Related variable(s): sis3, sis4, sis5, sis6, sis7, sis8

A4.2 SISScore (SIS raw score (sum of correct responses))

Description: SIS raw score indicating the number of correct responses (C) to the Six Item Screener questions SIS3, SIS4, SIS5, SIS6, SIS7, and SIS8. If none of the SIS questions is attempted, then the SIS raw score is missing.

Algorithm:

SISScore	Description
1-6	Count of "C" responses to SIS questions. SISScore=1 if only one response was correct, SISScore=2 if two responses were correct, etc.
0	If there are no "C" responses to SIS questions
NULL	If there are no attempted responses to SIS questions

Type: numeric

Related variable(s): sis3, sis4, sis5, sis6, sis7, sis8, sisattempt

A4.3 SISProratedScore (SIS prorated score (PPTs attempting 4+ items) = (# of correct SIS items * 6)/(# of attempted items))

Description: Prorated SIS score for PPTs who attempted 4 or more SIS items is given by the number of correct SIS items multiplied by 6 and divided by the total number of attempted SIS items.

Type: numeric

Algorithm:

SISProratedScore	Description
0-6	If a PPT attempts four or more SIS items then the prorated score is the number of correct items multiplied by 6 and divided by the total number of attempted items
NULL	If there are fewer than four attempted SIS items

Related variable(s): SISScore, SISAttempt

A4.4 SISFailure (SIS failure (prorated SIS score <= 3))

Description: Indicator variable for the failure of an SIS. SIS failure is defined as a prorated SIS score of three or less.

Type: numeric

Algorithm:

SISFailure	Description
1	If the SIS prorated score is non-missing and three or less, then the SIS was failed
0	If the SIS prorated score is greater than three, then the SIS was not failed
NULL	If the SIS prorated score is missing

Related variable(s): SISProratedScore

A5. SIS VARIABLES (ONE RECORD PER PPT)

A5.1 SISFAILURECAT (SIS FAILURE categories denoting number of failures)

Description: Since participants may have multiple SIS evaluations, SISFAILURECAT is a one-record-per-participant categorical variable that summarizes the number of SIS failures from the section above 'SIS Variables (multiple records per PPT)'. Categories denote the number of SIS Failures in order, where SISFailureCat=2 if there are at least two SIS failures per PPT, SISFailureCat=1 if there is only one SIS failure per PPT, SISFailureCat=0 if at least two SISs were not failed per PPT, and SISFailureCat=3 if any single SIS was not failed per PPT. If all SIS prorated scores are missing for a PPT, then SISFailureCat is also missing.

Type: numeric

Algorithm:

SISFailureCat	Description
2	2 or more SIS Failures
1	Any single SIS Failure
0	At least two SIS not failed

3	Any single SIS not failed
NULL	All SISFailure missing

Note: SISFAILURE1 indicates the first SIS evaluation for a participant, SISFAILURE2 indicates the second SIS evaluation, etc. These variables are the transposed SISFAILURE variable from the section 'SIS Variables (multiple records per PPT)'.

Related Variables(s): SISFAILURE1-SISFAILURE#

A5.2 SISFAILUREDATE (Date of first SIS failure or last observed not failed)

Description: Date variable that corresponds to the earliest date of SIS failure or the date of the last observed SIS that was not failed.

Type: Date

Algorithm:

SISFailureDate	Description
SIS0a	If SISFailureCat = 2, then it's the earliest SIS0a at which the second failure occurred
SIS0a	If SISFailureCat = 1, then it's the earliest SIS0a at which the first failure occurred
SIS0a	If SISFailureCat = 0, then it's the latest SIS0a between the last two not failed
SIS0a	If SISFailureCat = 3, then it's SIS0a corresponding to the not failed SIS
NULL	If SISFailureCat =NULL

Related Variable(s): SISFailureCat, SIS0a