INCIDENT EVENTS 2008-2019 DERIVED VARIABLE DICTIONARY

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Version 1.0 – Investigator Use Data Sets (_INV1 data file)

HCHS/SOL Incident Events 2008-2019 Derived Variable Dictionary

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1. Myocardial Infarction (MI) Events

1.1 INCIDENT_MI_2019 (Incident Myocardial Infarction (MI) Event by 2019)

This is a 0/1 variable indicating the myocardial infarction (MI) events reported and classified by HCHS/SOL endpoint reviewers.

IF baseline PreCHD_No_Angina not =1, then do:
IF (MID14 in(**1**,**2**) | MID24 in(**1**,**2**) | MID34 in(**1**,**2**)) among event review completed cases by 12/31/2019, then Incident_MI = 1. Otherwise Incident_MI = 0

Data needs to be transposed from multiple events into summary event record for a participant over time (reshape the data structure from long to wide).

When the first incident MI event happens, Incident_MI_2019=1. Otherwise set Incident_MI_2019 as 0.

Response format: 0=No Incident MI (No)
1=Incident MI (Yes)

Source variable(s):
MID14. Myocardial infarction classification in the 1st MID form Q4.
MID24. Myocardial infarction classification in the 2nd MID form Q4.
MID34. Myocardial infarction classification in the 3rd MID (adjudication) form Q4.
Event_status_MI. Event status for MI, when MID1 and MID2 classifications match, or MID3 presented, the event review completed.

1.2 RECUR_MI_2019_1 (MI as 1st Recurrence MI 2019)

This is a 0/1 variable indicating the first Recurrence MI events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had incident MI classified during 2008-2019.

Rank the incident MI events happened up to 12/31/2019 within each subjectID by Eventdate_MI, Rename the 2nd incident_MI as Recur_MI_2019_1.

Response format: 0=Not the first Recur MI (No)
1=the first Recur MI (Yes)

Source variable(s):
MID14. Myocardial infarction classification in the 1st MID form Q4.
MID24. Myocardial infarction classification in the 2nd MID form Q4.
MID34. Myocardial infarction classification in the 3rd MID (adjudication) form Q4.
Event_status_MI. Event status for MI, when MID1 and MID2 classifications match, or MID3 presented, the event review completed.

1.3 RECUR_MI_2019_2 (MI as 2nd Recurrence MI 2019)

This is a 0/1 variable indicating the 2nd Recurrence MI events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had 2 times incident MI classified during 2008-2019.

Rank the MI events happened up to 12/31/2019 within each subjectID by Eventdate_MI, Rename the 3rd incident_MI as Recur_MI_2019_2.

Response format: 0=Not the 2nd Recur MI (No)
1=the 2nd Recur MI (Yes)

Source variable(s):
MID14. Myocardial infarction classification in the 1st MID form Q4.
MID24. Myocardial infarction classification in the 2nd MID form Q4.
MID34. Myocardial infarction classification in the 3rd MID (adjudication) form Q4.
Event_status_MI. Event status for MI, when MID1 and MID2 classifications match, or MID3 presented, the event review completed.

1.4 RECUR_MI_2019_3 (MI as 3rd Recurrence MI 2019)

This is a 0/1 variable indicating the 3rd Recurrence MI events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had 3 times incident MI classified during 2008-2019.

Rank the MI events happened up to 12/31/2019 within each subjectID by Eventdate_MI, Rename the 4th incident_MI as Recur_MI_2019_3.

Response format: 0=Not the 3rd Recur MI (No)
1=the 3rd Recur MI (Yes)

Source variable(s):
MID14. Myocardial infarction classification in the 1st MID form Q4.
MID24. Myocardial infarction classification in the 2nd MID form Q4.
MID34. Myocardial infarction classification in the 3rd MID (adjudication) form Q4.
Event_status_MI. Event status for MI, when MID1 and MID2 classifications match, or MID3 presented, the event review completed.

1.5 FUTIME_MI (Follow up time MI event, censoring, or end of follow-up by 2019)

Define Eventdate_MI based on (MID10d, or MID20d or MID30d), the non-missing of these 3 date variables should be same for same event ID (MID10c, MID20c, MID30c).

This is the follow-up time for the first MI event during 2008-2019.
Follow-up time to MI event (FUTIME_MI) = Eventdate - Clindate form part_derv from baseline.
Otherwise, when Censor_date is not missing form censor data, FUTIME_MI=Censor_date-Clindate.
Otherwise, FUTIME_MI=12/31/2019-Clindate.

Source variable(s):
Eventdate_MI. event date based on (MID10d, or MID20d or MID30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.

1.6 FUTIME_MI_1 (Follow up time 1st Recurrence MI)

This is the follow-up time for the first Recurrence MI event during 2008-2019.

Source variable(s):
Eventdate_MI. event date based on (MID10d, or MID20d or MID30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_MI_2019_1.

1.7 FUTIME_MI_2 (Follow up time 2nd Recurrence MI)

This is the follow-up time for the second Recurrence MI event during 2008-2019.

Source variable(s):
Eventdate_MI. event date based on (MID10d, or MID20d or MID30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_MI_2019_2.

1.8 FUTIME_MI_3 (Follow up time 3rd Recurrence MI)

This is the follow-up time for the third Recurrence MI event during 2008-2019.

Source variable(s):
Eventdate_MI. event date based on (MID10d, or MID20d or MID30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_MI_2019_3.

2. Heart Failure (HF) Events

2.1 INCIDENT_HF_2019 (Incident Heart Failure (HF) Event by 2019)

This is a 0/1 variable indicating the Heart Failure (HF) events reported and classified by HCHS/SOL endpoint reviewers.

IF MHEA5 (from MHEA_IU1) not =1, then do:
IF (HFD19 in(**1**,**2**) | HFD29 in(**1**,**2**) | HFD39 in(**1**,**2**)) among event review completed cases by 12/31/2019, then Incident_HF = 1. Otherwise set Incident_HF = 0

Data needs to be transposed from multiple events into summary event record for a participant over time (reshape the data structure from long to wide).

When the first incident HF event happens, Incident_HF_2019=1. Otherwise set Incident_HF_2019 as 0.

Response format: 0=No Incident HF (No)
1=Incident HF (Yes)

Source variable(s):
HFD19. Does this patient have acute decompensated heart failure (ADHF)? In the HFD1 form Q9.
HFD29. Does this patient have acute decompensated heart failure (ADHF)? In the HFD2 form Q9.
HFD39. Does this patient have acute decompensated heart failure (ADHF)? In the HFD3 form Q9.
Event_status_HF. Event status for HF, when HFD1 and HFD2 classifications match, or HFD3 presented, the event review completed.

2.2 RECUR_HF_2019_1 (HF as 1st Recurrence HF 2019)

This is a 0/1 variable indicating the first Recurrence HF events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had incident HF classified during 2008-2019.

Rank the HF events happened up to 12/31/2019 within each subjectID by Eventdate_HF, and Rename the 2nd incident_HF as Recur_HF_2019_1.

Response format: 0=No the first recur HF (No)
1=the first recur HF (Yes)

Source variable(s):
HFD19. Does this patient have acute decompensated heart failure (ADHF)? In the HFD1 form Q9.
HFD29. Does this patient have acute decompensated heart failure (ADHF)? In the HFD2 form Q9.
HFD39. Does this patient have acute decompensated heart failure (ADHF)? In the HFD3 form Q9.
Event_status_HF. Event status for HF, when HFD1 and HFD2 classifications match, or HFD3 presented, the event review completed.

2.3 RECUR_HF_2019_2 (HF as 2nd Recurrence HF 2019)

This is a 0/1 variable indicating the 2nd Recurrence HF events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had 2 times incident HF classified during 2008-2019.

Rank the HF events happened up to 12/31/2019 within each subjectID by Eventdate_HF, and Rename the 3rd incident_HF as Recur_HF_2019_2.

Response format: 0=No the 2nd recur HF (No)
1=the 2nd recur HF (Yes)

Source variable(s):
HFD19. Does this patient have acute decompensated heart failure (ADHF)? In the HFD1 form Q9.
HFD29. Does this patient have acute decompensated heart failure (ADHF)? In the HFD2 form Q9.
HFD39. Does this patient have acute decompensated heart failure (ADHF)? In the HFD3 form Q9.
Event_status_HF. Event status for HF, when HFD1 and HFD2 classifications match, or HFD3 presented, the event review completed.

2.4 RECUR_HF_2019_3 (HF as 3rd Recurrence HF 2019)

This is a 0/1 variable indicating the 3rd Recurrence HF events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had 3 times incident HF classified during 2008-2019.

Rank the HF events happened up to 12/31/2019 within each subjectID by Eventdate_HF, and Rename the 4th incident_HF as Recur_HF_2019_3.

Response format: 0=No the 3rd recur HF (No)
1=the 3rd recur HF (Yes)

Source variable(s):
HFD19. Does this patient have acute decompensated heart failure (ADHF)? In the HFD1 form Q9.
HFD29. Does this patient have acute decompensated heart failure (ADHF)? In the HFD2 form Q9.
HFD39. Does this patient have acute decompensated heart failure (ADHF)? In the HFD3 form Q9.
Event_status_HF. Event status for HF, when HFD1 and HFD2 classifications match, or HFD3 presented, the event review completed.

2.5 RECUR_HF_2019_4 (HF as 4th Recurrence HF 2019)

This is a 0/1 variable indicating the 4th Recurrence HF events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had 4 times incident HF classified during 2008-2019.

Rank the HF events happened up to 12/31/2019 within each subjectID by Eventdate_HF and Rename the 5th incident_HF as Recur_HF_2019_4.

Response format: 0=No the 4th recur HF (No)
1=the 4th recur HF (Yes)

Source variable(s):
HFD19. Does this patient have acute decompensated heart failure (ADHF)? In the HFD1 form Q9.
HFD29. Does this patient have acute decompensated heart failure (ADHF)? In the HFD2 form Q9.
HFD39. Does this patient have acute decompensated heart failure (ADHF)? In the HFD3 form Q9.
Event_status_HF. Event status for HF, when HFD1 and HFD2 classifications match, or HFD3 presented, the event review completed.

2.6 RECUR_HF_2019_5 (HF as 5th Recurrence HF 2019)

This is a 0/1 variable indicating the 5th Recurrence HF events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had 5 times incident HF classified during 2008-2019.

Rank the HF events happened up to 12/31/2019 within each subjectID by Eventdate_HF, and Rename the 6th incident_HF as Recur_HF_2019_5.

Response format: 0=No the 5th recur HF (No)
1=the 5th recur HF (Yes)

Source variable(s):
HFD19. Does this patient have acute decompensated heart failure (ADHF)? In the HFD1 form Q9.
HFD29. Does this patient have acute decompensated heart failure (ADHF)? In the HFD2 form Q9.
HFD39. Does this patient have acute decompensated heart failure (ADHF)? In the HFD3 form Q9.
Event_status_HF. Event status for HF, when HFD1 and HFD2 classifications match, or HFD3 presented, the event review completed.

2.7 RECUR_HF_2019_6 (HF as 6th Recurrence HF 2019)

This is a 0/1 variable indicating the 6th Recurrence HF events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had 6 times incident HF classified during 2008-2019.

Rank the HF events happened up to 12/31/2019 within each subjectID by Eventdate_HF, and Rename the 7th incident_HF as Recur_HF_2019_6.

Response format: 0=No the 6th recur HF (No)
1=the 6th recur HF (Yes)

Source variable(s):
HFD19. Does this patient have acute decompensated heart failure (ADHF)? In the HFD1 form Q9.
HFD29. Does this patient have acute decompensated heart failure (ADHF)? In the HFD2 form Q9.
HFD39. Does this patient have acute decompensated heart failure (ADHF)? In the HFD3 form Q9.
Event_status_HF. Event status for HF, when HFD1 and HFD2 classifications match, or HFD3 presented, the event review completed.

2.8 RECUR_HF_2019_7 (HF as 7th Recurrence HF 2019)

This is a 0/1 variable indicating the 7th Recurrence HF events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had 7 times incident HF classified during 2008-2019.

Rank the HF events happened up to 12/31/2019 within each subjectID by Eventdate_HF, and Rename the 8th incident_HF as Recur_HF_2019_7.

Response format: 0=No the 7th recur HF (No)
1=the 7th recur HF (Yes)

Source variable(s):
HFD19. Does this patient have acute decompensated heart failure (ADHF)? In the HFD1 form Q9.
HFD29. Does this patient have acute decompensated heart failure (ADHF)? In the HFD2 form Q9.
HFD39. Does this patient have acute decompensated heart failure (ADHF)? In the HFD3 form Q9.
Event_status_HF. Event status for HF, when HFD1 and HFD2 classifications match, or HFD3 presented, the event review completed.

2.9 RECUR_HF_2019_8 (HF as 8th Recurrence HF 2019)

This is a 0/1 variable indicating the 8th Recurrence HF events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had 8 times incident HF classified during 2008-2019.

Rank the HF events happened up to 12/31/2019 within each subjectID by Eventdate_HF, and Rename the 9th incident_HF as Recur_HF_2019_8.

Response format: 0=No the 8th recur HF (No)
1=the 8th recur HF (Yes)

Source variable(s):
HFD19. Does this patient have acute decompensated heart failure (ADHF)? In the HFD1 form Q9.
HFD29. Does this patient have acute decompensated heart failure (ADHF)? In the HFD2 form Q9.
HFD39. Does this patient have acute decompensated heart failure (ADHF)? In the HFD3 form Q9.
Event_status_HF. Event status for HF, when HFD1 and HFD2 classifications match, or HFD3 presented, the event review completed.

2.10 FUTIME_HF (Follow up time HF event, censoring, or end of follow-up by 2019)

Define Eventdate_HF based on (HFD10d, or HFD20d or HFD30d), the non-missing of these 3 date variable should be same for same event ID (HFD10c, HFD20c, HFD30c).

Follow-up time to HF event (FUTIME_HF) = Eventdate_HF - Clindate form part_derv from baseline.

Otherwise, when Censor_date is not missing form C.1.1 censor data, FUTIME_HF=Censor_date-Clindate.

Otherwise, FUTIME_HF=12/31/2019-Clindate.

Source variable(s):
Eventdate_HF. event date based on (HFD10d, or HFD20d or HFD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.

2.11 FUTIME_HF_1 (Follow up time 1st Recurrence HF)

This is the follow-up time for the first Recurrence HF event during 2008-2019.

Source variable(s):
Eventdate_HF. event date based on (HFD10d, or HFD20d or HFD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_HF_2019_1.

2.12 FUTIME_HF_2 (Follow up time 2nd Recurrence HF)

This is the follow-up time for the second Recurrence HF event during 2008-2019.

Source variable(s):
Eventdate_HF. event date based on (HFD10d, or HFD20d or HFD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_HF_2019_2.

2.13 FUTIME_HF_3 (Follow up time 3rd Recurrence HF)

This is the follow-up time for the third Recurrence HF event during 2008-2019.

Source variable(s):
Eventdate_HF. event date based on (HFD10d, or HFD20d or HFD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_HF_2019_3.

2.14 FUTIME_HF_4 (Follow up time 4th Recurrence HF)

This is the follow-up time for the fourth Recurrence HF event during 2008-2019.

Source variable(s):
Eventdate_HF. event date based on (HFD10d, or HFD20d or HFD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_HF_2019_4.

2.15 FUTIME_HF_5 (Follow up time 5th Recurrence HF)

This is the follow-up time for the fifth Recurrence HF event during 2008-2019.

Source variable(s):
Eventdate_HF. event date based on (HFD10d, or HFD20d or HFD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_HF_2019_5.

2.16 FUTIME_HF_6 (Follow up time 6th Recurrence HF)

This is the follow-up time for the sixth Recurrence HF event during 2008-2019.

Source variable(s):
Eventdate_HF. event date based on (HFD10d, or HFD20d or HFD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_HF_2019_6.

2.17 FUTIME_HF_7 (Follow up time 7th Recurrence HF)

This is the follow-up time for the seventh Recurrence HF event during 2008-2019.

Source variable(s):
Eventdate_HF. event date based on (HFD10d, or HFD20d or HFD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_HF_2019_7.

2.18 FUTIME_HF_8 (Follow up time 8th Recurrence HF)

This is the follow-up time for the eighth Recurrence HF event during 2008-2019.

Source variable(s):
Eventdate_HF. event date based on (HFD10d, or HFD20d or HFD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_HF_2019_8.

2.19 HFPEF (HFpEF simplified Version)

This is the Simplified Version HFpEF based on Heart Failure abstraction and reviewer data during 2008-2019. Definition proposed and confirmed by Dr. Carlos Rodriguez,

IF HTF13a=1 OR HTF22b $\geq$ 50% OR HTF22d=0 OR HTF23b1 $\geq$ 50% then HTF_HFpEF=1; (% is the unit)

IF adjudication HFD3 data NOT missing then do:
IF HFD39 in (1 or 2) AND (HFD38 = 5 OR HTF_HFpEF=1) then set HFpEF=1; (END)

IF there is no adjudication HFD3 data then look at the first 2 reviewer forms HFD1 and HFD2:
IF HFD19 in (1 or 2) AND HFD29 in (1 or 2) AND (HFD18 = 5 OR HFD28=5 OR HTF_HFpEF=1) then set HFpEF=1; (END)

Otherwise, if all source variables used in above algorithm are missing simultaneously then set HFpEF as missing;
Otherwise set the rest cases as HFpEF=0;

Source variable(s):
HTF13a. Physician's note or discharge summary indicated Diastolic Heart Failure.
HTF22b. Transthoracic echocardiogram (TTE) Left Ventricular Ejection Fraction value (%).
HTF22d. Impaired LV Systolic function.
HTF23b1. Transesophageal echocardiogram (TEE) LV Ejection Fraction (%)
HFD18. What was the quantitative EF during this hospitalization (or < 3 months)? In HFD1.
HFD28. What was the quantitative EF during this hospitalization (or < 3 months)? In HFD2.
HFD38. What was the quantitative EF during this hospitalization (or < 3 months)? In HFD3.
HFD19. Reviewer Classification (have acute decompensated HF/ADHF) in HFD1.
HFD29. Reviewer Classification (have acute decompensated HF/ADHF) in HFD2.
HFD39. Reviewer Classification (have acute decompensated HF/ADHF) in HFD3.

2.20 HFREF (HFrEF simplified Version)

This is the Simplified Version HFrEF based on Heart Failure abstraction and reviewer data during 2008-2019. Definition proposed and confirmed by Dr. Carlos Rodriguez,

IF HTF13b=1 OR HTF22d=(1,2,3,4) then HTF_HFrEF=1;

IF adjudication HFD3 data NOT missing then do:
IF HFD39 in (1 or 2) AND (HFD38 = (1,2,3,4) OR HTF_HFrEF=1) then set HFrEF=1; (END)

IF there is no adjudication HFD3 data then look at the first 2 reviewer forms HFD1 and HFD2:
IF HFD19 in (1 or 2) AND HFD29 in (1 or 2) AND [(HFD18= 1 to 4 AND HFD28= 1 to 4) OR HTF_HFrEF=1] then set HFrEF=1; (END)

Otherwise, if all source variables used in above algorithm are missing simultaneously then set HFrEF as missing;
Otherwise set the rest cases as HFrEF=0;

Source variable(s):
HTF13b. Physician's note or discharge summary indicated Systolic Heart Failure.

HTF22d. Impaired LV Systolic function.
HFD18. What was the quantitative EF during this hospitalization (or < 3 months)? In HFD1.
HFD28. What was the quantitative EF during this hospitalization (or < 3 months)? In HFD2.
HFD38. What was the quantitative EF during this hospitalization (or < 3 months)? In HFD3.
HFD19. Reviewer Classification (have acute decompensated HF/ADHF) in HFD1.
HFD29. Reviewer Classification (have acute decompensated HF/ADHF) in HFD2.
HFD39. Reviewer Classification (have acute decompensated HF/ADHF) in HFD3.

3. Pulmonary (PUL) Events

3.1 ASTHMA_PLD (Define or highly probable Asthma reported in PLD by 2019)

This is a 0/1 variable indicating the define, or highly probable Asthma reported in Pulmonary Diagnosis Form (PLD) during 2008-2019 and classified by HCHS/SOL endpoint reviewers.

Asthma_PLD = (PLD12a =1 or 2, or PLD22a =1 or 2 or PLD32a =1 or 2), label as PLD define or highly probable Asthma by 2019

Response format: 0 = No
1 = Yes

Source variable(s):
PLD12a. CLRD with Asthma sub-type reported in PLD1 form on Q2a.
PLD22a. CLRD with Asthma sub-type reported in PLD2 form on Q2a.
PLD32a. CLRD with Asthma sub-type reported in PLD3 form on Q2a.

3.2 COPD_PLD (Define or highly probable COPD reported in PLD by 2019)

This is a 0/1 variable indicating the define, or highly probable COPD reported in Pulmonary Diagnosis Form (PLD) during 2008-2019 and classified by HCHS/SOL endpoint reviewers.

COPD_PLD = (PLD12b =1 or 2, or PLD22b =1 or 2 or PLD32b =1 or 2), label as PLD define or highly probable COPD by 2019

Response format: 0 = No
1 = Yes

Source variable(s):
PLD12b. CLRD with COPD sub-type reported in PLD1 form on Q2b.
PLD22b. CLRD with COPD sub-type reported in PLD2 form on Q2b.
PLD32b. CLRD with COPD sub-type reported in PLD3 form on Q2b.

3.3 CLRD_2019 (Chronic Lower Respiratory Disease by 2019)

This is a 0/1 variable indicating the define, or highly probable Chronic Lower Respiratory Disease (CLRD) reported in Pulmonary Diagnosis Form (PLD) during 2008-2019 and classified by HCHS/SOL endpoint reviewers.

Define CLRD_2019 = ASTHMA_PLD=1 or COPD_PLD=1 among event review completed cases by 12/31/2019.

Response format: 0 = No
1 = Yes

Source variable(s):
ASTHMA_PLD. Asthma sub-type CLRD reported in Pulmonary Diagnosis form (PLD).
COPD_PLD. COPD sub-type CLRD reported in Pulmonary Diagnosis form (PLD).
Event_Status_PUL. Event status for HF, when PLD1 and PLD2 classifications match, or PLD3 presented, the event review completed.

3.4 CLRD_ASTHMA_2019 (CLRD due to Asthma by 2019)

This is a 0/1 variable indicating the define, or highly probable Chronic Lower Respiratory Disease (CLRD) due to Asthma reported in Pulmonary Diagnosis Form (PLD) during 2008-2019 and classified by HCHS/SOL endpoint reviewers.

CLRD_Asthma_2019 = (CLRD_2019=1 and Asthma_PLD=1), label as CLRD due to Asthma by 2019

Response format: 0=No
1=Yes

Source variable(s):
CLRD_2019. Chronic Lower Respiratory Disease by 2019
Asthma_PLD. Define or highly probable Asthma reported in PLD by 2019

3.5 CLRD_COPD_2019 (CLRD due to COPD by 2019)

This is a 0/1 variable indicating the define, or highly probable Chronic Lower Respiratory Disease (CLRD) due to COPD reported in Pulmonary Diagnosis Form (PLD) during 2008-2019 and classified by HCHS/SOL endpoint reviewers.

CLRD_COPD_2019 = (CLRD_2019=1 and COPD_PLD=1), label as CLRD due to COPD by 2019

Response format: 0=No
1=Yes

Source variable(s):
CLRD_2019. Chronic Lower Respiratory Disease by 2019

COPD_PLD. Define or highly probable COPD reported in PLD by 2019

3.6 EXACERBATION_CLRD (Exacerbation of CLRD by 2019)

This is a 0/1 variable indicating the Exacerbation probable Chronic Lower Respiratory Disease (CLRD) cases during 2008-2019 among these already had Asthma and COPD at baseline.

Exacerbation_CLRD = where Prevalence_CLRD (Asthma_Ever=1 or COPD_Ever=1) =1 and (PLD15 =1 or 2, or PLD25 =1 or 2 or PLD35 =1 or 2),
label as Exacerbation of CLRD by 2019

Response format: 0=No
1=Yes

Source variable(s):
PLD15. Does this patient have an exacerbation of CLRD? In PLD1 at Q5.
PLD25. Does this patient have an exacerbation of CLRD? In PLD2 at Q5.
PLD35. Does this patient have an exacerbation of CLRD? In PLD3 at Q5.
Asthma_Ever. Baseline self-reported Asthma.
COPD_Ever. Baseline self-reported COPD.

3.7 FUTIME_CLRD (Follow up time CLRD event, censoring, or end of follow-up by 2019)

Define Eventdate_CLRD based on (PLD10d, or PLD20d or PLD30d), the non-missing of these 3 date variable should be same for same event ID (PLD10c, PLD20c, PLD30c).

Follow-up time to each of the CLRD event (FUTIME_CLRD) = Eventdate - Clindate form part_derv from baseline.
Otherwise, when Censor_date is not missing form censor data, FUTIME_CLRD=Censor_date-Clindate.
Otherwise, FUTIME_CLRD=12/31/2019-Clindate.

Source variable(s):
Eventdate_CLRD. event date based on (PLD10d, or PLD20d or PLD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.

3.8 FUTIME_CLRD_ASTHMA (Follow up time ASTHMA event, censoring, or end of follow-up by 2019)

Follow-up time to each of the Asthma event (FUTIME_CLRD_Asthma) = Eventdate - Clindate form part_derv from baseline.
Otherwise, when Censor_date is not missing form censor data, FUTIME_CLRD_ASTHMA=Censor_date-Clindate.
Otherwise, FUTIME_CLRD_ASTHMA=12/31/2019-Clindate.

Source variable(s):
Eventdate_CLRD. event date based on (PLD10d, or PLD20d or PLD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
CLRD_Asthma_2019.

3.9 FUTIME_CLRD_COPD (Follow up time of COPD event, censoring, or end of follow-up by 2019)

Follow-up time to each of the COPD event (FUTIME_CLRD_COPD) = Eventdate - Clindate form part_derv from baseline.

Otherwise, when Censor_date is not missing form censor data, FUTIME_CLRD_COPD=Censor_date-Clindate.

Otherwise, FUTIME_CLRD_COPD=12/31/2019-Clindate.

Source variable(s):
Eventdate_CLRD. event date based on (PLD10d, or PLD20d or PLD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
CLRD_COPD_2019

4. Stroke Events

4.1 INCIDENT_STR_2019 (Incident Stroke Event by 2019)

This is a 0/1 variable indicating the Stroke (STR) events reported and classified by HCHS/SOL endpoint reviewers.

IF Stroke (from visit 1 part_derv) not =1, then do:
IF (STD11=3 | STD21=3 | STD31=3) among event review completed cases by 12/31/2019, then Incident_STR_2019 = 1. Otherwise set Incident_STR_2019 = 0.

Data needs to be transposed from multiple events into summary event record for a participant over time (reshape the data structure from long to wide).

When the first incident Stroke event happens, Incident_STR_2019=1. Otherwise set Incident_STR_2019 as 0.

Response format: 0=No Incident Stroke (No)
1=Incident Stroke (Yes)

Source variable(s):
STD11. Primary Diagnosis of Stroke/TIA in the STD1 form Q1.
STD21. Primary Diagnosis of Stroke/TIA in the STD2 form Q1.
STD31. Primary Diagnosis of Stroke/TIA in the STD3 form Q1.

4.2 RECUR_STR_2019_1 (The 1st Recurrence Stroke 2019)

This is a 0/1 variable indicating the first Recurrence Stroke events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had incident Stroke classified during 2008-2019.

Rank the Stroke events happened up to 12/31/2019 within each subjectID by Eventdate_STR, and Rename the 2nd incident_HF as Recur_STR_2019_1.

Response format: 0=No the first recur Stroke (No)
1=the first recur Stroke (Yes)

Source variable(s):
STD11. Primary Diagnosis of Stroke/TIA in the STD1 form Q1.
STD21. Primary Diagnosis of Stroke/TIA in the STD2 form Q1.
STD31. Primary Diagnosis of Stroke/TIA in the STD3 form Q1.

4.3 RECUR_STR_2019_2 (The 2nd Recurrence Stroke 2019)

This is a 0/1 variable indicating the 2nd Recurrence Stroke events reported and classified by HCHS/SOL endpoint reviewers, among the participants who already had 2 times incident Stroke classified during 2008-2019.

Rank the Stroke events happened up to 12/31/2019 within each subjectID by Eventdate_STR, and Rename the 3rd incident_STR as Recur_STR_2019_2.

Response format: 0=No the 2nd recur Stroke (No)
1=the 2nd recur Stroke (Yes)

Source variable(s):
STD11. Primary Diagnosis of Stroke/TIA in the STD1 form Q1.
STD21. Primary Diagnosis of Stroke/TIA in the STD2 form Q1.
STD31. Primary Diagnosis of Stroke/TIA in the STD3 form Q1.

4.4 FUTIME_STR (Follow up time Stroke event, censoring, or end of follow-up by 2019)

Define Eventdate_STR based on (STD10d, or STD20d or STD30d), the non-missing of these 3 date variable should be same for same event ID (STD10c, STD20c, STD30c).

Follow-up time to Stroke event (FUTIME_STR) = Eventdate_STR - Clindate form part_derv from baseline.

Otherwise, when Censor_date is not missing form C.1.1 censor data, FUTIME_STR=Censor_date-Clindate.

Otherwise, FUTIME_STR=12/31/2019-Clindate.

Source variable(s):
Eventdate_STR. event date based on (STD10d, or STD20d or STD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.

4.5 FUTIME_STR_1 (Follow up time 1st Recurrence Stroke)

This is the follow-up time for the first Recurrence Stroke event during 2008-2019.

Source variable(s):
Eventdate_HF. event date based on (STD10d, or STD20d or STD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_STR_2019_1.

4.6 FUTIME_STR_2 (Follow up time 2nd Recurrence Stroke)

This is the follow-up time for the second Recurrence Stroke event during 2008-2019.

Source variable(s):
Eventdate_HF. event date based on (STD10d, or STD20d or STD30d)
Censor_date. Death or withdrawal date.
Clindate. Baseline clinic date.
RECUR_STR_2019_2.

5. Cardiovascular Disease (CVD) Events

5.1 INCIDENT_CVD_2019 (Incident CVD (MI, HF or Stroke) Event by 2019)

This is the incident cardiovascular disease (CVD) Event file, by the end of 2019, based on MI, HF and STR incident event files 2008-2019.

An incident event indicator for cardiovascular disease (Incident_CVD_2019) can be created where any of the following incident events occurred: positive for Incident_MI_2019 or Incident_HF_2019 or Incident_STR_2019.

Incident_CVD_2019=1 IF ANY OF (Incident_STR_2019, Incident_MI_2019 or Incident_HF_2019) =1;
Otherwise Incident_CVD_2019=0;

Response format: 0=No Self-reported CVD by 2019 (No)
1= Self-reported CVD by 2019 (Yes)

Source variable(s):
Incident_STR_2019. Incident Stroke event classified by 2019.
Incident_MI_2019. Incident MI event classified by 2019.
Incident_HF_2019. Incident Heart Failure event classified by 2019.

5.2 FUTIME_CVD (Follow up time of CVD (MI, HF or Stroke) event, censor or the end of follow-up by 2019)

The follow up time of the CVD event would be the earliest/shortest of the three incident events (Stroke, MI, HF) follow up times.

Source variable(s):
FUTIME_STR. Follow up time of Stroke incident event.
FUTIME_MI. Follow up time of MI incident event.
FUTIME_HF. Follow up time of HF incident event.

6. Pregnancy Complication Events

6.1 INCIDENT_GHTN (Preeclampsia to Eclampsia Event)

This is a 0/1 variable indicating the incident Pregnancy Complications Diagnosis of GHTN (Preeclampsia to Eclampsia) Event reported and classified by HCHS/SOL endpoint reviewers for the participants without prevalence GHTN. Three separate reviewer diagnosis forms are compared to classify this outcome. See Overview documentation and HCHS/SOL Endpoint Outcomes Ascertainment Manual.

If PRE_GHTN NE 1 then do;
if pcd39 in (1,2,3) then INCIDENT_GHTN=1;
else if pcd19 in (1,2,3) & pcd29 in (1,2,3) then INCIDENT_GHTN=1. Otherwise set incident_GHTN=0.

Response format: 0=No Incident GHTN (No)
1=Incident GHTN (Yes)

Source variable(s):
PCD19. Gestational hypertension reviewer 1 classification in the PCD1 form Q9.
PCD29. Gestational hypertension reviewer 2 classification in the PCD2 form Q9
PCD39. Gestational hypertension reviewer 3 classification in the PCD3 form Q9.

6.2 INCIDENT_GDM (Pregnancy Complications Diagnosis of GDM Event)

This is a 0/1 variable indicating the incident Pregnancy Complications Diagnosis of GDM Event reported and classified by HCHS/SOL endpoint reviewers for the participants without prevalence GDM.
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If PRE_GDM NE 1 then do;
if pcd318 in (1,2,3) then INCIDENT_GDM=1;
else if pcd118 in (1,2,3) & pcd218 in (1,2,3) then INCIDENT_GDM=1. Otherwise set incident_GDM=0.

Response format: 0=No Incident GDM (No)
1=Incident GDM (Yes)

Source variable(s):
PCD118. Gestational Diabetes reviewer 1 Classification in the PCD1 form Q18.

PCD218. Gestational Diabetes reviewer 2 Classification in the PCD2 form Q18.
PCD318. Gestational Diabetes reviewer 3 Classification in the PCD3 form Q18.

6.3 INCIDENT_PCD (Pregnancy Complications (PCD) Event)

This is a 0/1 variable indicating one or more of the possible incident Pregnancy Complications (PC=GHTN or GDM) occurred. Hospitalization admissions for pregnancy related events reported in AFU and classified by HCHS/SOL endpoint reviewers for the participants without a pregnancy complication at Visit 1.

If PRE_PCD NE 1 then do;
if PCD31 in (1,2,3) then INCIDENT_PCD=1
Otherwise if ((PCD11 in (1,2,3) & PCD21 in (1,2,3)) & PCD31=.) then INCIDENT_PCD=1;
Otherwise set incident_PCD=0.

Response format: 0=No Incident PCD (No)
1=Incident PCD (Yes)

Source variable(s):
PCD11. Primary Classification of Pregnancy Complication in the PCD1 form Q1.
PCD21. Primary Classification of Pregnancy Complication in the PCD2 form Q1
PCD31. Primary Classification of Pregnancy Complication in the PCD3 form Q1.