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*Robert Scott and Jing Hua requested (e-mail dated 18n March 2016) to update
the OMICs dataset for the Gene-Lifestyle Interactions (CHARGE) 4 analyses
projects.  Robert Luben suggested we provided the 1st and 2nd HC only.

clear
use /lucy/epic/home/pyt20/Work/Robertscott/OMICS/2016/data23032016_epicomics
count

*merge with drugs for statin use
merge 1:1 id using /home9/epic/analysis/drugs, keepusing(statin_1hc
statin_2hc statin_3hc) keep(1 3)
drop _merge
count

*merge with main2 for smoking status 2HC
merge 1:1 id using /home9/epic/analysis/main2, keepusing(cigstat2) keep(1 3)
drop _merge
count

*create new variables for current smoking status 1HC & 2HC
gen CURSMK_1hc = 1 if cigstat==1
replace CURSMK_1hc = 0 if cigstat==2 | cigstat==3
label variable CURSMK_1hc "Current smoking status 1HC;1=current
smoker,0=never/former smoker"

gen CURSMK_2hc = 1 if cigstat2==1
replace CURSMK_2hc = 0 if cigstat2==2 | cigstat2==3
label variable CURSMK_2hc "Current smoking status 2HC;1=current
smoker,0=never/former smoker"

*create new variables for ever smoking status 1HC & 2HC
gen EVERSMK_1hc = 1 if cigstat==1 | cigstat==2
replace EVERSMK_1hc = 0 if cigstat==3
label variable EVERSMK_1hc "Ever smoking status 1HC;1=current/former
smoker,0=never smoker"

gen EVERSMK_2hc = 1 if cigstat2==1 | cigstat2==2
replace EVERSMK_2hc = 0 if cigstat2==3
label variable EVERSMK_2hc "Ever smoking status 2HC;1=current/former
smoker,0=never smoker"

*merge with alcohol for drinking status 1HC
merge 1:1 id using /home9/epic/analysis/alcohol, keepusing(alcohol_1hc
unitsnow) keep(1 3)
drop _merge
count

*merge with alcohol2 for drinking status 2HC
merge 1:1 id using /home9/epic/analysis/alcohol2, keepusing(alcohol_2hc
unitnow2) keep(1 3)
drop _merge
count

*create new variables for current drinking status 1HC & 2HC
gen CURDRINK_1hc = 1 if alcohol_1hc==1
replace CURDRINK_1hc = 0 if alcohol_1hc==2 | alcohol_1hc==3
label variable CURDRINK_1hc "Current drinking status 1HC;1=current
drinker,0=not a current drinker"
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gen CURDRINK_2hc = 1 if alcohol_2hc==1
replace CURDRINK_2hc = 0 if alcohol_2hc==2 | alcohol_2hc==3
label variable CURDRINK_2hc "Current drinking status 2HC;1=current
drinker,0=not a current drinker"

*create new variables for current regular alcohol use status 1HC & 2HC
gen REGDRINK_1hc=1 if CURDRINK_1hc == 1 & unitsnow >=2 & unitsnow <.
replace REGDRINK_1hc=0 if CURDRINK_1hc == 0 | CURDRINK_1hc == 1 & unitsnow
<2
label variable REGDRINK_1hc "Current regular alcohol use per week
1HC;1=regular>=2drinks,0=not a regular"

gen REGDRINK_2hc=1 if CURDRINK_2hc == 1 & unitnow2 >=2 & unitnow2 <.
replace REGDRINK_2hc=0 if CURDRINK_2hc == 0 | CURDRINK_2hc == 1 & unitnow2
<2
label variable REGDRINK_2hc "Current regular alcohol use per week
2HC;1=regular>=2drinks,0=not a regular"

*create new variables for quantity of drinks for those who currently drink
1HC & 2HC
gen QUDRINK_1hc = 1 if CURDRINK_1hc==1 & unitsnow >=8 & unitsnow <.
replace QUDRINK_1hc = 0 if CURDRINK_1hc==1 & unitsnow <8
label variable QUDRINK_1hc "Quantity of drinks per week for current drinker
1HC;1=>=8drinks;0=1-7drinks"

gen QUDRINK_2hc = 1 if CURDRINK_2hc==1 & unitnow2 >=8 & unitnow2 <.
replace QUDRINK_2hc = 0 if CURDRINK_2hc==1 & unitnow2 <8
label variable QUDRINK_2hc "Quantity of drinks per week for current drinker
2HC;1=>=8drinks;0=1-7drinks"

*ERRORS: there were 8 participants in 2HC had systol<diastol, need to
replace values as missing values
replace systol2 = . if systol2<diastol2
replace diastol2 = . if systol2<diastol2
count

*adjust blood pressure for people taking any anti-hypertensive (BP lowering)
medications 1HC & 2HC
gen systol_antihyp1hc = systol + 15 if antihyp_1hc==1
replace systol_antihyp1hc = systol if antihyp_1hc==0
replace systol_antihyp1hc = . if missing(systol_antihyp1hc)
label variable systol_antihyp1hc "Adjusted systolic BP mmHg (1HC)-use/nonuse
of antihypertensive drugs"

gen systol_antihyp2hc = systol2 + 15 if antihyp_2hc==1
replace systol_antihyp2hc = systol2 if antihyp_2hc==0
replace systol_antihyp2hc = . if missing(systol_antihyp2hc)
label variable systol_antihyp2hc "Adjusted systolic BP mmHg (2HC)-use/nonuse
of antihypertensive drugs"

gen diastol_antihyp1hc = diastol + 10 if antihyp_1hc==1
replace diastol_antihyp1hc = diastol if antihyp_1hc==0
replace diastol_antihyp1hc = . if missing(diastol_antihyp1hc)
label variable diastol_antihyp1hc "Adjusted diastolic BP mmHg (1HC)-
use/nonuse of antihypertensive drugs"

gen diastol_antihyp2hc = diastol2 + 10 if antihyp_2hc==1
replace diastol_antihyp2hc = diastol2 if antihyp_2hc==0
replace diastol_antihyp2hc = . if missing(diastol_antihyp2hc)
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label variable diastol_antihyp2hc "Adjusted diastolic BP mmHg (2HC)-
use/nonuse of antihypertensive drugs"

*derive Mean Arterial Pressure (MAP) and Pulse Pressure (PP) using adusted
blood pressure values 1HC & 2HC
gen MAP_1hc = diastol_antihyp1hc + (systol_antihyp1hc -
diastol_antihyp1hc)/3
label variable MAP_1hc "Mean Arterial Pressure mmHg based on adjusted bp
values 1HC"

gen MAP_2hc = diastol_antihyp2hc + (systol_antihyp2hc -
diastol_antihyp2hc)/3
label variable MAP_2hc "Mean Arterial Pressure mmHg based on adjusted bp
values 2HC"

gen PP_1hc = systol_antihyp1hc - diastol_antihyp1hc
label variable PP_1hc "Pulse Pressure mmHg based on adjusted bp values 1HC"

gen PP_2hc = systol_antihyp2hc - diastol_antihyp2hc
label variable PP_2hc "Pulse Pressure mmHg based on adjusted bp values 2HC"

*create new variables for education
gen SOMECOL = 1 if edlevel09 >=2 & edlevel09 <.
replace SOMECOL = 0 if edlevel09<2
label variable SOMECOL "Some college (any education beyond high
school);1=yes,0=no"

gen GRADCOL = 1 if edlevel09==3
replace GRADCOL = 0 if edlevel09<3
label variable GRADCOL "Graduated college (completed a 4 year college
degree;1=yes,0=no"

*create new variable for physical activity
gen PA = 0 if rupe >=3 & rupe <.
replace PA = 1 if rupe<3
label variable PA "Physical activity;0=physically active,1=inactive"

sort id
isid id
save
/lucy/epic/home/pyt20/Work/Robertscott/OMICS/CHARGE/data20042016_epicomics,
replace

drop id bio_id
order omicsid
sort omicsid
isid omicsid
save
/lucy/epic/home/pyt20/Work/Robertscott/OMICS/CHARGE/data20042016_epicomics_d
ist, replace
```