```
*****************************************************************************************************************
*     UTILITY TO ANALYSE RPAQ DATA, ENTERED AND CLEANED ACCORDING TO MRC EPI UNIT GUIDELINES                    *
*     NOTE: This script uses median values within dataset for missing imputation!                               *
*                                                                                                               *
*   Authors: Robert Scott, Marcel den Hoed, Kate Westgate, Soren Brage (MRC Epidemiology Unit, Cambridge, UK)   *
*   Version: NDNS Processing V1.0 (Y2-11)                                                                       *
*   Date 19/11/2021                                                                                             *
*****************************************************************************************************************

/*
Version history:
v1.3 - Incorporated version and template differences for Fenland R6 - June 2013
v1.4 - Specifically for Fenland R6.1 (merge in R6 dataset to use for median imputation when missing values) - July 2013
v1.5 - Generic version for web (removed Fenland specific information) - Oct 2013
v2.0 - Updated to inlcude Cambridge Index & process version 10 (web and paper) as well as continue to process versions 8 & 9 - Jul 2018
       Home and Lesiure variables redefined: Household, mowing the lawn, watering the lawn, heavy gardening, weeding and pruning and DIY
                                             have been moved from Leisure to Home classification. Leisure also includes ActiveComputerGames
                                             and Skiing (added to Version 10).
       MAJOR UPDATE: Computer use at home has been updated from 1.5 MET to 1 MET due to the inclusion of active computer games.

Version 3.0: Adapted by LG & KW Jan2021
Occupational activity quantified according to the approach outlined by Golubic et al (PLoS One 2014). Average intensity for each
work category derived from 12,435 UK adults with RPAQ concurrently with objective assessment of PAEE, estimated from individually
calibrated combined heart rate and movement sensing (Lindsay et al, IJBNPA 2019).

NDNDS Processing V1.0 (Y2-11):
Updated to process Y2-11 NDNS RPAQ data. For these questionnaires the following recreation activities were split into the
into indoor/outdoor activities. To process the data has been kept seperate, but all processed with the same MET score. The follow is a
list of those that were split and the matching variables:
swimLeis: swimLeisIn & swimLeisOut
bowling: bowlingIn & bowlingOut
tennisBadminton: tennisIn, tennisOut, badminton
footballRugbyHockey: footRugHockIn & footRugHockOut
netVolleyBasketBall: netVolBasketIn & netVolBasketOut

The NDNS code is set up to take in the variables _EpiA from the NDNS Archive. These need altering to be able to run through the
main processing code using up to line 126 in the code below.
EpiA relates to the variables being updated by MRC Epidemiology unit from the original RPAQ variables. This was needed as some
earlier processing has been completed and it did not want to be confused. The A relates to the versions of processing code being
used (Y2-11: Version 1.0 & Y12, DNAC a above using Version 2.0).

*/

clear
set more off
set mem 600m
capture log close

************************
*** GLOBAL VARIABLES ***
************************
global INPUT_FOLDER = "" //Folder where input file is saved
global OUTPUT_FOLDER = "" //Folder where output is directed to

global INPUT_FILE = "" //Name of CSV file of input (do not include .csv)
global OUTPUT_SUFFIX = "" //Suffix of the output file (do not include any extensions). Displayed after each year.

******************
*** PROCESSING ***
******************
insheet using "$INPUT_FOLDER/$INPUT_FILE.csv", comma case clear

//taking the variables from the NDNS archive and renaming to match that of the processing code
rename StudyYr_EpiA StudyYr
rename template_EpiA template
rename *_EpiA* *_CLEAN*

//If re-creating dataset - remove possible output variables tha have been provided
```

```
foreach var in TOTMETHRS TOTMETHRS_w_UNACCtime TOTtime TOTALtime ACTMETS ACTMETS_w_UNACCtime ///
HOME_METS WORK_METS LEIS_METS COMMUTE_METS HOME_ACTMETS WORK_ACTMETS LEIS_ACTMETS COMMUTE_ACTMETS PAEE HOME_PAEE ///
WORK_PAEE LEIS_PAEE COMMUTE_PAEE SED_INTENSITY LIGHT_INTENSITY MODERATE_INTENSITY VIGOROUS_INTENSITY SEDtime ///
LIGHTtime MODERATEtime VIGOROUStime {
    cap drop `var'*
}

//Replacing converted to frequencies per week back to entry coding for recreational activities
foreach activity in swimComp swimLeis swimLeisIn swimLeisOut backPackMountainClimb ///
walkPleasure cyclingRacingRough cyclePleasure mowing waterLawn heavyGardening ///
weedPrune dIY Household aerobicsHigh aerobicsOther exerciseWeights conditionExercise ///
floorExercise dancing compRun jog bowling bowlingIn bowlingOut tennisBadminton ///
tennisIn tennisOut badminton squash tableTennis golf footballRugbyHockey ///
footRugHockIn footRugHockOut cricket rowing netVolleyBasketBall ///
netVolBasketIn netVolBasketOut huntingShootingFish horseBased snookerBillardsDarts ///
musicalInstrumentSing iceSkating Skiing sailingWindsurfBoat combatsSports ActiveComputerGames {
    replace `activity'_CLEAN = `activity'_CLEAN_orig
    drop `activity'_CLEAN_orig

    //replacing hr + min with missing as when used it will be set to 0 but needed for marking in MISSING code
    replace `activity'Hr_CLEAN = -1 if `activity'Hr_CLEAN == 0
    replace `activity'Min_CLEAN = -1 if `activity'Min_CLEAN == 0

}

//This code is designed to run on Years 2-11 only. Dropping anything beyond that
drop if StudyYr == "Y12" | StudyYr =="DNAC"

//Replacing anything that is missing with -1 as this would be how the dataset would be entered
foreach var in Gettingabout_CLEAN Mediaweekdaypre6pm_CLEAN Mediaweekdaypost6pm_CLEAN Mediaweekendpre6pm_CLEAN ///
Mediaweekendpost6pm_CLEAN Computerweekdaypre6pm_CLEAN Computerweekdaypost6pm_CLEAN Computerweekendpre6pm_CLEAN ///
Computerweekendpost6pm_CLEAN Stairweekday_CLEAN Stairweekend_CLEAN Paidemployment_CLEAN Work4wkago_CLEAN ///
Work3wkago_CLEAN Work2wkago_CLEAN Work1wkago_CLEAN Worktype_CLEAN Wrkmiles_CLEAN Wrkkms_CLEAN Wrktimesperweek_CLEAN ///
Wrkbycar_CLEAN Wrkbypubtran_CLEAN Wrkbybicycle_CLEAN Wrkbyfoot_CLEAN swimComp_CLEAN swimCompHr_CLEAN ///
swimCompMin_CLEAN swimLeis_CLEAN swimLeisHr_CLEAN swimLeisMin_CLEAN swimLeisIn_CLEAN swimLeisInHr_CLEAN ///
swimLeisInMin_CLEAN swimLeisOut_CLEAN swimLeisOutHr_CLEAN swimLeisOutMin_CLEAN backPackMountainClimb_CLEAN ///
backPackMountainClimbHr_CLEAN backPackMountainClimbMin_CLEAN walkPleasure_CLEAN walkPleasureHr_CLEAN ///
walkPleasureMin_CLEAN cyclingRacingRough_CLEAN cyclingRacingRoughHr_CLEAN cyclingRacingRoughMin_CLEAN ///
cyclePleasure_CLEAN cyclePleasureHr_CLEAN cyclePleasureMin_CLEAN mowing_CLEAN mowingHr_CLEAN mowingMin_CLEAN ///
waterLawn_CLEAN waterLawnHr_CLEAN waterLawnMin_CLEAN heavyGardening_CLEAN heavyGardeningHr_CLEAN ///
heavyGardeningMin_CLEAN weedPrune_CLEAN weedPruneHr_CLEAN weedPruneMin_CLEAN dIY_CLEAN dIYHr_CLEAN dIYMin_CLEAN ///
Household_CLEAN HouseholdHr_CLEAN HouseholdMin_CLEAN aerobicsHigh_CLEAN aerobicsHighHr_CLEAN aerobicsHighMin_CLEAN ///
aerobicsOther_CLEAN aerobicsOtherHr_CLEAN aerobicsOtherMin_CLEAN exerciseWeights_CLEAN exerciseWeightsHr_CLEAN ///
exerciseWeightsMin_CLEAN conditionExercise_CLEAN conditionExerciseHr_CLEAN conditionExerciseMin_CLEAN ///
floorExercise_CLEAN floorExerciseHr_CLEAN floorExerciseMin_CLEAN dancing_CLEAN dancingHr_CLEAN dancingMin_CLEAN ///
compRun_CLEAN compRunHr_CLEAN compRunMin_CLEAN jog_CLEAN jogHr_CLEAN jogMin_CLEAN bowling_CLEAN bowlingHr_CLEAN ///
bowlingMin_CLEAN bowlingIn_CLEAN bowlingInHr_CLEAN bowlingInMin_CLEAN bowlingOut_CLEAN bowlingOutHr_CLEAN ///
bowlingOutMin_CLEAN tennisBadminton_CLEAN tennisBadmintonHr_CLEAN tennisBadmintonMin_CLEAN tennisIn_CLEAN ///
tennisInHr_CLEAN tennisInMin_CLEAN tennisOut_CLEAN tennisOutHr_CLEAN tennisOutMin_CLEAN badminton_CLEAN ///
badmintonHr_CLEAN badmintonMin_CLEAN squash_CLEAN squashHr_CLEAN squashMin_CLEAN tableTennis_CLEAN ///
tableTennisHr_CLEAN tableTennisMin_CLEAN golf_CLEAN golfHr_CLEAN golfMin_CLEAN footballRugbyHockey_CLEAN ///
footballRugbyHockeyHr_CLEAN footballRugbyHockeyMin_CLEAN footRugHockIn_CLEAN footRugHockInHr_CLEAN ///
footRugHockInMin_CLEAN footRugHockOut_CLEAN footRugHockOutHr_CLEAN footRugHockOutMin_CLEAN cricket_CLEAN ///
cricketHr_CLEAN cricketMin_CLEAN rowing_CLEAN rowingHr_CLEAN rowingMin_CLEAN netVolleyBasketBall_CLEAN ///
netVolleyBasketBallHr_CLEAN netVolleyBasketBallMin_CLEAN netVolBasketIn_CLEAN netVolBasketInHr_CLEAN ///
netVolBasketInMin_CLEAN netVolBasketOut_CLEAN netVolBasketOutHr_CLEAN netVolBasketOutMin_CLEAN ///
huntingShootingFish_CLEAN huntingShootingFishHr_CLEAN huntingShootingFishMin_CLEAN horseBased_CLEAN ///
horseBasedHr_CLEAN horseBasedMin_CLEAN snookerBillardsDarts_CLEAN snookerBillardsDartsHr_CLEAN ///
snookerBillardsDartsMin_CLEAN musicalInstrumentSing_CLEAN musicalInstrumentSingHr_CLEAN ///
musicalInstrumentSingMin_CLEAN Skiing_CLEAN SkiingHr_CLEAN SkiingMin_CLEAN iceSkating_CLEAN iceSkatingHr_CLEAN ///
iceSkatingMin_CLEAN sailingWindsurfBoat_CLEAN sailingWindsurfBoatHr_CLEAN sailingWindsurfBoatMin_CLEAN ///
combatsSports_CLEAN combatsSportsHr_CLEAN combatsSportsMin_CLEAN ActiveComputerGames_CLEAN ///
ActiveComputerGamesHr_CLEAN ActiveComputerGamesMin_CLEAN {
    replace `var' = -1 if `var' == .
}

//Processing split into the different years so any means used can be from that year:
levelsof StudyYr, local(YEARS)
```

```
137
138  qui foreach YEAR in `YEARS' {
139      nois di "`YEAR'"
140
141      preserve
142
143      keep if StudyYr == "`YEAR'"
144      count
145
146      local N=r(N)
147      if `N'<1000 {
148          * This dataset includes less than 1000 individuals.
149          * Please note that in many cases, missing values will be imputed using in-sample median values for those particular variables.
150          * If you are happy with this approach, just comment out the stop line below (add "*" at beginning of line) and rerun the script.
151          *stop
152      }
153
154      ****************************
155      /* Derivation of variables */
156      ****************************
157      * MISSINGA, data on TV-viewing, computer use and stairclimbing
158      gen MISSINGA = 2
159      * Default is no missingness: MISSINGA=2
160      replace MISSINGA = 1 if Gettingabout_CLEAN < 1 & Mediaweekdaypre6pm_CLEAN < 1 & Mediaweekdaypost6pm_CLEAN < 1 & ///
161      Mediaweekendpre6pm_CLEAN < 1 & Mediaweekendpost6pm_CLEAN < 1 & Computerweekdaypre6pm_CLEAN < 1 & ///
162      Computerweekdaypost6pm_CLEAN < 1 & Computerweekendpre6pm_CLEAN < 1 & Computerweekendpost6pm_CLEAN < 1 & ///
163      Stairweekday_CLEAN < 1 & Stairweekend_CLEAN < 1
164      * If all data is missing, then MISSINGA=1
165
166      /* MISSINGJOB AND EMPLOYED */
167      gen MISSINGJOB = 2
168      * Default is no missingness: MISSINGJOB=2 */
169      *MISSINGJOB == 1 also includes individuals who report being (un)employed and who record no work activities. i.e. they are still seen as missing.
170      replace MISSINGJOB = 1 if (Work4wkago_CLEAN < 0 & Work3wkago_CLEAN < 0 & ///
171      Work2wkago_CLEAN < 0 & Work1wkago_CLEAN < 0 & (Worktype_CLEAN <1 | Worktype_CLEAN == .))
172      *rpaqversion 8 has no data on work hours or employment status, but does have worktype data
173      replace MISSINGJOB = 1 if QVersion_CLEAN == 8 & (Worktype_CLEAN < 1 | Worktype_CLEAN == .)
174      gen EMPLOYED = .
175      replace EMPLOYED = 2 if Paidemployment_CLEAN == 2
176      replace EMPLOYED = 1 if Paidemployment_CLEAN == 1 | MISSINGJOB == 2
177      * EMPLOYED = 1 if they are in employment
178      * NDNS Y2-8 data entry for Paidemployment was the same as electronic entry (1 = Yes & 2 = No)
179
180      /* MISSINGCOMMUT */
181      gen MISSINGCOMMUT = 2
182      replace MISSINGCOMMUT = 1 if Wrktimesperweek_CLEAN < 0 & Wrkbycar_CLEAN < 1 & Wrkbypubtran_CLEAN < 1 & ///
183      Wrkbybicycle_CLEAN < 1 & Wrkbyfoot_CLEAN < 1
184
185      /* MISSINGC */
186      /*Updated to include broken down indoor/outdoor activities from NDNS */
187      gen MISSINGC = 2
188      replace MISSINGC = 1 if ///
189      swimComp_CLEAN < 1 & swimCompHr_CLEAN < 0 & swimCompMin_CLEAN < 0 & ///
190      swimLeis_CLEAN < 1 & swimLeisHr_CLEAN < 0 & swimLeisMin_CLEAN < 0 & ///
191      swimLeisIn_CLEAN < 1 & swimLeisInHr_CLEAN < 0 & swimLeisInMin_CLEAN < 0 & ///
192      swimLeisOut_CLEAN < 1 & swimLeisOutHr_CLEAN < 0 & swimLeisOutMin_CLEAN < 0 & ///
193      backPackMountainClimb_CLEAN < 1 & backPackMountainClimbHr_CLEAN < 0 & backPackMountainClimbMin_CLEAN < 0 & ///
194      walkPleasure_CLEAN < 1 & walkPleasureHr_CLEAN < 0 & walkPleasureMin_CLEAN < 0 & ///
195      cyclingRacingRough_CLEAN < 1 & cyclingRacingRoughHr_CLEAN < 0 & cyclingRacingRoughMin_CLEAN < 0 & ///
196      cyclePleasure_CLEAN < 1 & cyclePleasureHr_CLEAN < 0 & cyclePleasureMin_CLEAN < 0 & ///
197      mowing_CLEAN < 1 & mowingHr_CLEAN < 0 & mowingMin_CLEAN < 0 & ///
198      waterLawn_CLEAN < 1 & waterLawnHr_CLEAN < 0 & waterLawnMin_CLEAN < 0 & ///
199      heavyGardening_CLEAN < 1 & heavyGardeningHr_CLEAN < 0 & heavyGardeningMin_CLEAN < 0 & ///
200      weedPrune_CLEAN < 1 & weedPruneHr_CLEAN < 0 & weedPruneMin_CLEAN < 0 & ///
201      dIY_CLEAN < 1 & dIYHr_CLEAN < 0 & dIYMin_CLEAN < 0 & ///
202      Household_CLEAN < 1 & HouseholdHr_CLEAN < 0 & HouseholdMin_CLEAN < 0 & ///
203      aerobicsHigh_CLEAN < 1 & aerobicsHighHr_CLEAN < 0 & aerobicsHighMin_CLEAN < 0 & ///
204      aerobicsOther_CLEAN < 1 & aerobicsOtherHr_CLEAN < 0 & aerobicsOtherMin_CLEAN < 0 & ///
```

```
205     exerciseWeights_CLEAN < 1 & exerciseWeightsHr_CLEAN < 0 & exerciseWeightsMin_CLEAN < 0 & ///
206     conditionExercise_CLEAN < 1 & conditionExerciseHr_CLEAN < 0 & conditionExerciseMin_CLEAN < 0 & ///
207     floorExercise_CLEAN < 1 & floorExerciseHr_CLEAN < 0 & floorExerciseMin_CLEAN < 0 & ///
208     dancing_CLEAN < 1 & dancingHr_CLEAN < 0 & dancingMin_CLEAN < 0 & ///
209     compRun_CLEAN < 1 & compRunHr_CLEAN < 0 & compRunMin_CLEAN < 0 & ///
210     jog_CLEAN < 1 & jogHr_CLEAN < 0 & jogMin_CLEAN < 0 & ///
211     bowling_CLEAN < 1 & bowlingHr_CLEAN < 0 & bowlingMin_CLEAN < 0 & ///
212     bowlingIn_CLEAN < 1 & bowlingInHr_CLEAN < 0 & bowlingInMin_CLEAN < 0 & ///
213     bowlingOut_CLEAN < 1 & bowlingOutHr_CLEAN < 0 & bowlingOutMin_CLEAN < 0 & ///
214     tennisBadminton_CLEAN < 1 & tennisBadmintonHr_CLEAN < 0 & tennisBadmintonMin_CLEAN < 0 & ///
215     tennisIn_CLEAN < 1 & tennisInHr_CLEAN < 0 & tennisInMin_CLEAN < 0 & ///
216     tennisOut_CLEAN < 1 & tennisOutHr_CLEAN < 0 & tennisOutMin_CLEAN < 0 & ///
217     badminton_CLEAN < 1 & badmintonHr_CLEAN < 0 & badmintonMin_CLEAN < 0 & ///
218     squash_CLEAN < 1 & squashHr_CLEAN < 0 & squashMin_CLEAN < 0 & ///
219     tableTennis_CLEAN < 1 & tableTennisHr_CLEAN < 0 & tableTennisMin_CLEAN < 0 & ///
220     golf_CLEAN < 1 & golfHr_CLEAN < 0 & golfMin_CLEAN < 0 & ///
221     footballRugbyHockey_CLEAN < 1 & footballRugbyHockeyHr_CLEAN < 0 & footballRugbyHockeyMin_CLEAN < 0 & ///
222     footRugHockIn_CLEAN < 1 & footRugHockInHr_CLEAN < 0 & footRugHockInMin_CLEAN < 0 & ///
223     footRugHockOut_CLEAN < 1 & footRugHockOutHr_CLEAN < 0 & footRugHockOutMin_CLEAN < 0 & ///
224     cricket_CLEAN < 1 & cricketHr_CLEAN < 0 & cricketMin_CLEAN < 0 & ///
225     rowing_CLEAN < 1 & rowingHr_CLEAN < 0 & rowingMin_CLEAN < 0 & ///
226     netVolleyBasketBall_CLEAN < 1 & netVolleyBasketBallHr_CLEAN < 0 & netVolleyBasketBallMin_CLEAN < 0 & ///
227     netVolBasketIn_CLEAN < 1 & netVolBasketInHr_CLEAN < 0 & netVolBasketInMin_CLEAN & ///
228     netVolBasketOut_CLEAN < 1 & netVolBasketOutHr_CLEAN < 0 & netVolBasketOutMin_CLEAN & ///
229     huntingShootingFish_CLEAN < 1 & huntingShootingFishHr_CLEAN < 0 & huntingShootingFishMin_CLEAN < 0 & ///
230     horseBased_CLEAN < 1 & horseBasedHr_CLEAN < 0 & horseBasedMin_CLEAN < 0 & ///
231     snookerBillardsDarts_CLEAN < 1 & snookerBillardsDartsHr_CLEAN < 0 & snookerBillardsDartsMin_CLEAN < 0 & ///
232     musicalInstrumentSing_CLEAN < 1 & musicalInstrumentSingHr_CLEAN< 0 & musicalInstrumentSingMin_CLEAN < 0 & ///
233     iceSkating_CLEAN < 1 & iceSkatingHr_CLEAN < 0 & iceSkatingMin_CLEAN < 0 & ///
234     Skiing_CLEAN < 1 & SkiingHr_CLEAN < 0 & SkiingMin_CLEAN <0 & ///
235     sailingWindsurfBoat_CLEAN < 1 & sailingWindsurfBoatHr_CLEAN< 0 & sailingWindsurfBoatMin_CLEAN < 0 & ///
236     combatsSports_CLEAN < 1 & combatsSportsHr_CLEAN < 0 & combatsSportsMin_CLEAN < 0  & ///
237     ActiveComputerGames_CLEAN < 1 & ActiveComputerGamesHr_CLEAN < 0 & ActiveComputerGamesMin_CLEAN < 0
238
239     /* MISSING */
240     gen MISSING = 2
241     replace MISSING = 1 if MISSINGJOB == 1 & MISSINGCOMMUT == 1 & MISSINGC == 1
242
243     /* CALCULATION OF DAILY DURATIONS */
244     gen GETABOUT = Gettingabout_CLEAN
245     replace GETABOUT = 0 if Gettingabout_CLEAN < 1 & MISSINGA == 2
246     replace GETABOUT = . if Gettingabout_CLEAN < 1 & MISSINGA == 1
247
248     /* TO ASSIGN THE MEDIAN FOR TV WHEN MISSING */
249     gen TVDUR1 = . if Mediaweekdaypre6pm_CLEAN < 1 & MISSINGA == 1 /* 'Not completed''*/
250     replace TVDUR1 = 0 if Mediaweekdaypre6pm_CLEAN < 1 & MISSINGA == 2 /* 'Not completed''*/
251     replace TVDUR1 = 0 if Mediaweekdaypre6pm_CLEAN == 1
252     replace TVDUR1 = 2.5 if Mediaweekdaypre6pm_CLEAN == 2
253     replace TVDUR1 = 7.5 if Mediaweekdaypre6pm_CLEAN == 3
254     replace TVDUR1 = 12.5 if Mediaweekdaypre6pm_CLEAN == 4
255     replace TVDUR1 = 17.5 if Mediaweekdaypre6pm_CLEAN == 5
256     replace TVDUR1 = 22.5 if Mediaweekdaypre6pm_CLEAN == 6
257     gen TVDUR2 = . if Mediaweekdaypost6pm_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
258     replace TVDUR2 = 7.5 if Mediaweekdaypost6pm_CLEAN < 1 & MISSINGA == 2 /* 'Not completed'*/
259     replace TVDUR2 = 0 if Mediaweekdaypost6pm_CLEAN == 1
260     replace TVDUR2 = 2.5 if Mediaweekdaypost6pm_CLEAN == 2
261     replace TVDUR2 = 7.5 if Mediaweekdaypost6pm_CLEAN == 3
262     replace TVDUR2 = 12.5 if Mediaweekdaypost6pm_CLEAN == 4
263     replace TVDUR2 = 17.5 if Mediaweekdaypost6pm_CLEAN == 5
264     replace TVDUR2 = 22.5 if Mediaweekdaypost6pm_CLEAN == 6
265     gen TVDUR3 = . if Mediaweekendpre6pm_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
266     replace TVDUR3 = 1 if Mediaweekendpre6pm_CLEAN < 1  & MISSINGA == 2 /* 'Not completed'*/
267     replace TVDUR3 = 0 if Mediaweekendpre6pm_CLEAN == 1
268     replace TVDUR3 = 1 if Mediaweekendpre6pm_CLEAN == 2
269     replace TVDUR3 = 3 if Mediaweekendpre6pm_CLEAN == 3
270     replace TVDUR3 = 5 if Mediaweekendpre6pm_CLEAN == 4
271     replace TVDUR3 = 7 if Mediaweekendpre6pm_CLEAN == 5
272     replace TVDUR3 = 9 if Mediaweekendpre6pm_CLEAN == 6
```

```
gen TVDUR4 = . if Mediaweekendpost6pm_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
replace TVDUR4 = 5 if Mediaweekendpost6pm_CLEAN < 1 & MISSINGA == 2 /* 'Not completed'*/
replace TVDUR4 = 0 if Mediaweekendpost6pm_CLEAN == 1
replace TVDUR4 = 1 if Mediaweekendpost6pm_CLEAN == 2
replace TVDUR4 = 3 if Mediaweekendpost6pm_CLEAN == 3
replace TVDUR4 = 5 if Mediaweekendpost6pm_CLEAN == 4
replace TVDUR4 = 7 if Mediaweekendpost6pm_CLEAN == 5
replace TVDUR4 = 9 if Mediaweekendpost6pm_CLEAN == 6
gen DURTV = (TVDUR1+TVDUR2+TVDUR3+TVDUR4)/7

/* TO ASSIGN THE MEDIAN FOR COMPUTER WHEN MISSING */
gen COMPDUR1 = . if Computerweekdaypre6pm_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
replace COMPDUR1 = 0 if Computerweekdaypre6pm_CLEAN < 1 & MISSINGA == 2 /* 'Not completed'*/
replace COMPDUR1 = 0 if Computerweekdaypre6pm_CLEAN == 1
replace COMPDUR1 = 2.5 if Computerweekdaypre6pm_CLEAN == 2
replace COMPDUR1 = 7.5 if Computerweekdaypre6pm_CLEAN == 3
replace COMPDUR1 = 12.5 if Computerweekdaypre6pm_CLEAN == 4
replace COMPDUR1 = 17.5 if Computerweekdaypre6pm_CLEAN == 5
replace COMPDUR1 = 22.5 if Computerweekdaypre6pm_CLEAN == 6
gen COMPDUR2 = . if Computerweekdaypost6pm_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
replace COMPDUR2 = 2.5 if Computerweekdaypost6pm_CLEAN < 1 & MISSINGA == 2 /* 'Not completed'*/
replace COMPDUR2 = 0 if Computerweekdaypost6pm_CLEAN == 1
replace COMPDUR2 = 2.5 if Computerweekdaypost6pm_CLEAN == 2
replace COMPDUR2 = 7.5 if Computerweekdaypost6pm_CLEAN == 3
replace COMPDUR2 = 12.5 if Computerweekdaypost6pm_CLEAN == 4
replace COMPDUR2 = 17.5 if Computerweekdaypost6pm_CLEAN == 5
replace COMPDUR2 = 22.5 if Computerweekdaypost6pm_CLEAN == 6
gen COMPDUR3 = . if Computerweekendpre6pm_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
replace COMPDUR3 = 1 if Computerweekendpre6pm_CLEAN < 1 & MISSINGA == 2 /* 'Not completed'*/
replace COMPDUR3 = 0 if Computerweekendpre6pm_CLEAN == 1
replace COMPDUR3 = 1 if Computerweekendpre6pm_CLEAN == 2
replace COMPDUR3 = 3 if Computerweekendpre6pm_CLEAN == 3
replace COMPDUR3 = 5 if Computerweekendpre6pm_CLEAN == 4
replace COMPDUR3 = 7 if Computerweekendpre6pm_CLEAN == 5
replace COMPDUR3 = 9 if Computerweekendpre6pm_CLEAN == 6
gen COMPDUR4 = . if Computerweekendpost6pm_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
replace COMPDUR4 = 1 if Computerweekendpost6pm_CLEAN < 1 & MISSINGA == 2 /* 'Not completed'*/
replace COMPDUR4 = 0 if Computerweekendpost6pm_CLEAN == 1
replace COMPDUR4 = 1 if Computerweekendpost6pm_CLEAN == 2
replace COMPDUR4 = 3 if Computerweekendpost6pm_CLEAN == 3
replace COMPDUR4 = 5 if Computerweekendpost6pm_CLEAN == 4
replace COMPDUR4 = 7 if Computerweekendpost6pm_CLEAN == 5
replace COMPDUR4 = 9 if Computerweekendpost6pm_CLEAN == 6
gen DURCOMP = (COMPDUR1+COMPDUR2+COMPDUR3+COMPDUR4)/7

/* FLIGHTS OF STAIRS */
gen STAIRFLIGHT1 = . if Stairweekday_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
replace STAIRFLIGHT1 = 40 if Stairweekday_CLEAN < 1 & MISSINGA == 2 /* 'Not completed'*/
replace STAIRFLIGHT1 = 0 if Stairweekday_CLEAN == 1
replace STAIRFLIGHT1 = 15 if Stairweekday_CLEAN == 2
replace STAIRFLIGHT1 = 40 if Stairweekday_CLEAN == 3
replace STAIRFLIGHT1 = 65 if Stairweekday_CLEAN == 4
replace STAIRFLIGHT1 = 90 if Stairweekday_CLEAN == 5
replace STAIRFLIGHT1 = 115 if Stairweekday_CLEAN == 6
gen STAIRFLIGHT2 = . if Stairweekend_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
replace STAIRFLIGHT2 = 16 if Stairweekend_CLEAN == . & MISSINGA == 2 /* 'Not completed'*/
replace STAIRFLIGHT2 = 0 if Stairweekend_CLEAN == 1
replace STAIRFLIGHT2 = 6 if Stairweekend_CLEAN == 2
replace STAIRFLIGHT2 = 16 if Stairweekend_CLEAN == 3
replace STAIRFLIGHT2 = 26 if Stairweekend_CLEAN == 4
replace STAIRFLIGHT2 = 36 if Stairweekend_CLEAN == 5
replace STAIRFLIGHT2 = 46 if Stairweekend_CLEAN == 6
*assign 10 seconds per flights of stairs
gen DURSTAIRFLIGHT = ((STAIRFLIGHT1+STAIRFLIGHT2)/7)/360


/* JOB ACTIVITY */
foreach var in Work4wkago_CLEAN Work3wkago_CLEAN Work2wkago_CLEAN Work1wkago_CLEAN {
```

```
341         replace `var' = . if `var' < 0
342     }
343
344     forvalues i = 1/4 {
345         gen DURATIONJOB`i' = Work`i'wkago_CLEAN
346         replace DURATIONJOB`i' = . if Work`i'wkago_CLEAN < 0
347     }
348
349
350     egen DURATIONJOB = rowtotal(DURATIONJOB1 DURATIONJOB2 DURATIONJOB3 DURATIONJOB4)
351     replace DURATIONJOB = . if DURATIONJOB1 ==. &  DURATIONJOB2 == . & DURATIONJOB3 == . & DURATIONJOB4 == .
352     su DURATIONJOB if MISSINGJOB == 2, detail
353     *version 8 had no work duration question. assigning median to those who answered the worktype question.
354     replace DURATIONJOB = r(p50) if QVersion_CLEAN == 8 & MISSINGJOB == 2
355     *if median not computable, assign 37hrs/wk where worktype is reported but no duration
356     replace DURATIONJOB = 4*37 if Worktype_CLEAN > 0 & Worktype_CLEAN < 5 & (DURATIONJOB <0 | DURATIONJOB ==.)
357     *also assign median where worktype is reported but no duration
358     replace DURATIONJOB = r(p50) if Worktype_CLEAN > 0 & Worktype_CLEAN < 5 & (DURATIONJOB <0 | DURATIONJOB ==.)
359
360     *generate average weekly hours over last 4 weeks
361     replace DURATIONJOB = DURATIONJOB/4
362     *generate average daily hours of work
363     gen DURJOB = DURATIONJOB/7 if DURATIONJOB > 0 & DURATIONJOB <= 84
364     replace DURJOB = 0 if DURATIONJOB == 0
365     *truncate to max 12hrs per day
366     replace DURJOB = 12 if DURATIONJOB > 84 & DURATIONJOB !=.
367
368
369     /* TRANSPORTATION ACTIVITY */
370     gen FREQCARINI = 0 if (Wrkbycar_CLEAN < 1 | Wrkbycar_CLEAN > 4) & MISSINGCOMM == 2 /* 'NOT COMPLETED'*/
371     replace FREQCARINI = 0 if Wrkbycar_CLEAN == 4 /* 'Never or rarely'*/
372     replace FREQCARINI = .25 if Wrkbycar_CLEAN == 3 /* 'Occasionally'*/
373     replace FREQCARINI = .75 if Wrkbycar_CLEAN == 2 /* 'Usually'*/
374     replace FREQCARINI = 1 if Wrkbycar_CLEAN == 1 /* 'Always'*/
375     gen FREQPUBLICINI = 0 if (Wrkbypubtran_CLEAN < 1 | Wrkbypubtran_CLEAN > 4) & MISSINGCOMM == 2 /* 'NOT COMPLETED'*/
376     replace FREQPUBLICINI = 0 if Wrkbypubtran_CLEAN == 4 /* 'Never or rarely'*/
377     replace FREQPUBLICINI = .25 if Wrkbypubtran_CLEAN == 3 /* 'Occasionally'*/
378     replace FREQPUBLICINI = .75 if Wrkbypubtran_CLEAN == 2 /* 'Usually'*/
379     replace FREQPUBLICINI = 1 if Wrkbypubtran_CLEAN == 1 /* 'Always'*/
380     gen FREQCYCLEINI = 0 if (Wrkbybicycle_CLEAN < 1 | Wrkbybicycle_CLEAN > 4) & MISSINGCOMM == 2 /* 'NOT COMPLETED'*/
381     replace FREQCYCLEINI = 0 if Wrkbybicycle_CLEAN == 4 /* 'Never or rarely'*/
382     replace FREQCYCLEINI = .25 if Wrkbybicycle_CLEAN == 3 /* 'Occasionally'*/
383     replace FREQCYCLEINI = .75 if Wrkbybicycle_CLEAN == 2 /* 'Usually'*/
384     replace FREQCYCLEINI = 1 if Wrkbybicycle_CLEAN == 1 /* 'Always'*/
385     gen FREQWALKINI = 0 if (Wrkbyfoot_CLEAN < 1 | Wrkbyfoot_CLEAN > 4) & MISSINGCOMM == 2 /* 'NOT COMPLETED'*/
386     replace FREQWALKINI = 0 if Wrkbyfoot_CLEAN == 4 /* 'Never or rarely'*/
387     replace FREQWALKINI = .25 if Wrkbyfoot_CLEAN == 3 /* 'Occasionally'*/
388     replace FREQWALKINI = .75 if Wrkbyfoot_CLEAN == 2 /* 'Usually'*/
389     replace FREQWALKINI = 1 if Wrkbyfoot_CLEAN == 1 /* 'Always'*/
390     gen FREQTOTAL = FREQCARINI + FREQPUBLICINI + FREQCYCLEINI + FREQWALKINI
391
392
393     gen DISTWORKMILES = .
394     replace DISTWORKMILES = 0 if  Wrkmiles_CLEAN <=0 & Wrkkms_CLEAN <=0
395     replace DISTWORKMILES = (Wrkkms_CLEAN*0.62) if (Wrkkms_CLEAN >0 & Wrkmiles_CLEAN <=0)
396     replace DISTWORKMILES = (Wrkmiles_CLEAN) if (Wrkmiles_CLEAN >0 & Wrkkms_CLEAN <=0)
397     replace DISTWORKMILES = ((Wrkmiles_CLEAN +0.62*Wrkkms_CLEAN)/2) if (Wrkkms_CLEAN > 0 & Wrkmiles_CLEAN > 0)
398
399     *Truncation of total distance ****set maximum miles to 100miles for anyone claiming more than that as a distance
400     replace DISTWORKMILES = 100 if (DISTWORKMILES > 100 & DISTWORKMILES  != .)
401
402     gen CARMILES = 0
403     replace CARMILES = DISTWORKMILES * FREQCARINI if FREQCARINI >= 0.25
404     gen PUBLICMILES = 0
405     replace PUBLICMILES = DISTWORKMILES * FREQPUBLICINI if FREQPUBLICINI  >= 0.25
406     gen CYCLEMILES = 0
407     replace CYCLEMILES = DISTWORKMILES * FREQCYCLEINI if FREQCYCLEINI >= 0.25
408     gen WALKMILES = 0
```

```
replace WALKMILES = DISTWORKMILES * FREQWALKINI if FREQWALKINI  >= 0.25

gen TOTALTRAVMILES_DER = CARMILES + PUBLICMILES + CYCLEMILES + WALKMILES

gen DISTFACTOR = DISTWORKMILES/TOTALTRAVMILES_DER

*Assigning distance to multi-mode commuters.
* We have made many assumptions here. We have only made amendments when the total frequency of travel is > 1.25. Eg when someone reports always travelling by car
* and walking, we make the assumption that they drive most (90%) of the way. This may get further truncated in the next section.

replace CARMILES = (0.5*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI <0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
replace PUBLICMILES = (0.5*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI <0.25 & FREQWALKINI < 0.25& FREQTOTAL >= 1.25

replace CARMILES = (0.95*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQPUBLICINI <0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
replace CYCLEMILES = (0.05*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQPUBLICINI <0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25

replace CARMILES = (0.99*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCYCLEINI <0.25 & FREQPUBLICINI < 0.25 & FREQTOTAL >= 1.25
replace WALKMILES = (0.01*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQWALKINI >= 0.25  & FREQCYCLEINI <0.25 & FREQPUBLICINI < 0.25 & FREQTOTAL >= 1.25

replace PUBLICMILES = (0.9*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQCARINI <0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
replace CYCLEMILES = (0.1*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQCARINI <0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25

replace PUBLICMILES = (0.99*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCYCLEINI <0.25 & FREQCARINI < 0.25 & FREQTOTAL >= 1.25
replace WALKMILES = (0.01*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCYCLEINI <0.25 & FREQCARINI < 0.25 &  FREQTOTAL >= 1.25

replace CYCLEMILES = (0.95*DISTWORKMILES) if FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCARINI <0.25 & FREQPUBLICINI < 0.25 & FREQTOTAL >= 1.25
replace WALKMILES = (0.05*DISTWORKMILES) if FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCARINI <0.25 & FREQPUBLICINI < 0.25 &  FREQTOTAL >= 1.25

replace CARMILES = (0.475*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
replace PUBLICMILES = (0.475*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
replace CYCLEMILES = (0.05*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25

replace CARMILES = (0.495*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCYCLEINI <0.25 &  FREQTOTAL >= 1.25
replace PUBLICMILES = (0.495*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCYCLEINI <0.25 &  FREQTOTAL >= 1.25

replace WALKMILES = (0.01*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCYCLEINI <0.25 & FREQTOTAL >= 1.25

replace CARMILES = (0.9*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQPUBLICINI < 0.25 & FREQTOTAL >= 1.25
replace CYCLEMILES = (0.09*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQPUBLICINI < 0.25 & FREQTOTAL >= 1.25
replace WALKMILES = (0.01*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQPUBLICINI < 0.25 & FREQTOTAL >= 1.25

replace PUBLICMILES = (0.9*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCARINI <0.25 & FREQTOTAL >= 1.25
replace CYCLEMILES = (0.09*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCARINI <0.25 & FREQTOTAL >= 1.25
replace WALKMILES = (0.01*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCARINI <0.25 & FREQTOTAL >= 1.25

replace CARMILES = (0.45*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQTOTAL >= 1.25
replace PUBLICMILES = (0.45*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQTOTAL >= 1.25
replace CYCLEMILES = (0.09*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQTOTAL >= 1.25
replace WALKMILES = (0.01*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQTOTAL >= 1.25

*Truncate Walking and Cycling
replace CYCLEMILES = 20 if CYCLEMILES > 20 & CYCLEMILES !=.
replace WALKMILES = 3 if WALKMILES > 3 & WALKMILES !=.


gen DURWALK = WALKMILES*2*(5/7)/3
gen DURCYCLE = CYCLEMILES*2*(5/7)/10
gen DURCAR = CARMILES*2*(5/7)/45
gen DURPUBLIC = PUBLICMILES*2*(5/7)/30

*assume 2 journeys over 5 days at 3mph (walk), cycle at 10mph, car at 45mph and public at 30mph - rescaled to daily basis in 7 day week

**************************
/* RECREATIONAL ACTIVITY */
/* JP- Takes frequencies reported in categories to frequencies per week */
**************************

foreach var in swimComp_CLEAN swimLeis_CLEAN swimLeisIn_CLEAN swimLeisOut_CLEAN backPackMountainClimb_CLEAN ///
walkPleasure_CLEAN cyclingRacingRough_CLEAN cyclePleasure_CLEAN mowing_CLEAN waterLawn_CLEAN heavyGardening_CLEAN ///
```

```
    weedPrune_CLEAN dIY_CLEAN Household_CLEAN aerobicsHigh_CLEAN aerobicsOther_CLEAN exerciseWeights_CLEAN conditionExercise_CLEAN ///
    floorExercise_CLEAN dancing_CLEAN compRun_CLEAN jog_CLEAN bowling_CLEAN bowlingIn_CLEAN bowlingOut_CLEAN tennisBadminton_CLEAN ///
    tennisIn_CLEAN tennisOut_CLEAN badminton_CLEAN squash_CLEAN tableTennis_CLEAN golf_CLEAN footballRugbyHockey_CLEAN ///
    footRugHockIn_CLEAN footRugHockOut_CLEAN cricket_CLEAN rowing_CLEAN netVolleyBasketBall_CLEAN ///
    netVolBasketIn_CLEAN netVolBasketOut_CLEAN huntingShootingFish_CLEAN horseBased_CLEAN snookerBillardsDarts_CLEAN ///
    musicalInstrumentSing_CLEAN iceSkating_CLEAN Skiing_CLEAN sailingWindsurfBoat_CLEAN combatsSports_CLEAN ActiveComputerGames_CLEAN {

        gen `var'_orig = `var' // this keeps a copy of the untranslated frequency variables so we can save them

        replace `var' = 0     if `var' <= 1 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1 & MISSINGC == 2
        replace `var' = 1/4   if `var' == 2 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1
        replace `var' = 2.5/4 if `var' == 3 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1
        replace `var' = 1     if `var' == 4 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1
        replace `var' = 2.5   if `var' == 5 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1
        replace `var' = 4.5   if `var' == 6 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1
        replace `var' = 7     if `var' == 7 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1

        //this section handles for when the data entry has been done using the alternative data entry template(#2) where was coded 1-8 but missing 2:
        replace `var' = 0     if `var' <= 2 & QVersion_CLEAN == 9 & template==2 & MISSINGC == 2
        replace `var' = 1/4   if `var' == 3 & QVersion_CLEAN == 9 & template==2
        replace `var' = 2.5/4 if `var' == 4 & QVersion_CLEAN == 9 & template==2
        replace `var' = 1     if `var' == 5 & QVersion_CLEAN == 9 & template==2
        replace `var' = 2.5   if `var' == 6 & QVersion_CLEAN == 9 & template==2
        replace `var' = 4.5   if `var' == 7 & QVersion_CLEAN == 9 & template==2
        replace `var' = 7     if `var' == 8 & QVersion_CLEAN == 9 & template==2

    }

    **************************
    /* JP- assigns maximum duration of activities to allow for over reporting of the duration of an episode */
    **************************

    *truncated high durations
    //Household & ActiveComputerGames need a category!
    foreach x in swimComp swimLeis swimLeisIn swimLeisOut compRun jog bowling bowlingIn bowlingOut tennisBadminton tennisIn tennisOut ///
    badminton tableTennis horseBased snookerBillardsDarts musicalInstrumentSing iceSkating ActiveComputerGames {

        replace `x'Hr_CLEAN = 4 if `x'Hr_CLEAN >4 & `x'Hr_CLEAN !=.
        replace `x'Min_CLEAN = 0 if `x'Hr_CLEAN >=4 & `x'Hr_CLEAN !=.
    }

    foreach x in exerciseWeights squash {

        replace `x'Hr_CLEAN = 2 if `x'Hr_CLEAN >2 & `x'Hr_CLEAN !=.
        replace `x'Min_CLEAN = 0 if `x'Hr_CLEAN >=2 & `x'Hr_CLEAN !=.
    }

    foreach x in mowing waterLawn aerobicsHigh aerobicsOther conditionExercise floorExercise footballRugbyHockey footRugHockIn ///
    footRugHockOut netVolleyBasketBall netVolBasketIn netVolBasketOut rowing combatsSports {

        replace `x'Hr_CLEAN = 3 if `x'Hr_CLEAN >3 & `x'Hr_CLEAN !=.
        replace `x'Min_CLEAN = 0 if `x'Hr_CLEAN >=3 & `x'Hr_CLEAN !=.
    }

    foreach x in backPackMountainClimb walkPleasure cyclingRacingRough cyclePleasure heavyGardening weedPrune dancing cricket {

        replace `x'Hr_CLEAN = 8 if `x'Hr_CLEAN >8 & `x'Hr_CLEAN !=.
        replace `x'Min_CLEAN = 0 if `x'Hr_CLEAN >=8 & `x'Hr_CLEAN !=.
    }

    foreach x in dIY golf huntingShootingFish Skiing sailingWindsurfBoat  {

        replace `x'Hr_CLEAN = 10 if `x'Hr_CLEAN >10 & `x'Hr_CLEAN !=.
        replace `x'Min_CLEAN = 0 if `x'Hr_CLEAN >=10 & `x'Hr_CLEAN !=.
    }

    *where no frequency is reported (but duration is) assign median frequency from those participating in the activity
    *major assumption
```

```
545     foreach x in swimComp swimLeis swimLeisIn swimLeisOut backPackMountainClimb walkPleasure cyclingRacingRough cyclePleasure mowing ///
546     waterLawn heavyGardening weedPrune dIY Household aerobicsHigh aerobicsOther exerciseWeights conditionExercise floorExercise ///
547     dancing compRun jog bowling bowlingIn bowlingOut tennisBadminton tennisIn tennisOut badminton squash tableTennis golf ///
548     footballRugbyHockey footRugHockIn footRugHockOut cricket rowing netVolleyBasketBall netVolBasketIn netVolBasketOut huntingShootingFish ///
549     horseBased snookerBillardsDarts musicalInstrumentSing iceSkating Skiing sailingWindsurfBoat combatsSports ActiveComputerGames {
550
551         su `x'_CLEAN if `x'_CLEAN > 0 & `x'_CLEAN !=., detail
552         replace `x'_CLEAN = r(p50) if (`x'_CLEAN <=0 | `x'_CLEAN == .) & ((`x'Hr_CLEAN > 0 & `x'Hr_CLEAN < 20) | (`x'Min_CLEAN > 0 & `x'Min_CLEAN <= 60))
553         replace `x'_CLEAN = 0 if (`x'_CLEAN == . | `x'_CLEAN < 0 ) & MISSINGC == 2
554     }
555
556     *where no duration is reported (but frequency is) assign median duration from those participating in the activity
557     foreach x in swimComp swimLeis swimLeisIn swimLeisOut backPackMountainClimb walkPleasure cyclingRacingRough cyclePleasure mowing ///
558     waterLawn heavyGardening weedPrune dIY Household aerobicsHigh aerobicsOther exerciseWeights conditionExercise floorExercise ///
559     dancing compRun jog bowling bowlingIn bowlingOut tennisBadminton tennisIn tennisOut badminton squash tableTennis golf ///
560     footballRugbyHockey footRugHockIn footRugHockOut cricket rowing netVolleyBasketBall netVolBasketIn netVolBasketOut huntingShootingFish ///
561     horseBased snookerBillardsDarts musicalInstrumentSing iceSkating Skiing sailingWindsurfBoat combatsSports ActiveComputerGames {
562
563         replace `x'Hr_CLEAN = 0 if `x'Hr_CLEAN < 0
564         replace `x'Min_CLEAN = 0 if `x'Min_CLEAN < 0
565         *generate total hrs of each activity
566         gen TOT_`x'Hr = .
567         replace TOT_`x'Hr = (`x'Hr_CLEAN + (`x'Min_CLEAN/60)) if ((`x'Hr_CLEAN > 0 & `x'Hr_CLEAN <20) | (`x'Min_CLEAN > 0 & `x'Min_CLEAN <=60))
568         su TOT_`x'Hr if TOT_`x'Hr > 0 & TOT_`x'Hr < 20, detail
569         replace TOT_`x'Hr = r(p50) if (TOT_`x'Hr  == .) & (`x'_CLEAN > 0 & `x'_CLEAN < 8)
570         replace TOT_`x'Hr = 0 if (TOT_`x'Hr == . & MISSINGC == 2)
571     }
572
573     foreach x in swimComp swimLeis swimLeisIn swimLeisOut backPackMountainClimb walkPleasure cyclingRacingRough cyclePleasure mowing ///
574     waterLawn heavyGardening weedPrune dIY Household aerobicsHigh aerobicsOther exerciseWeights conditionExercise floorExercise ///
575     dancing compRun jog bowling bowlingIn bowlingOut tennisBadminton tennisIn tennisOut badminton squash tableTennis golf ///
576     footballRugbyHockey footRugHockIn footRugHockOut cricket rowing netVolleyBasketBall netVolBasketIn netVolBasketOut huntingShootingFish ///
577     horseBased snookerBillardsDarts musicalInstrumentSing iceSkating Skiing sailingWindsurfBoat combatsSports ActiveComputerGames {
578
579     *generate total hrs of each activity per day
580         gen TOTDUR_`x' = (TOT_`x'Hr * `x'_CLEAN)/7
581     }
582
583     ***************************
584     /* calculates total reported leisure time activities per day */
585     ***************************
586     egen DURATIONLEIS = rowtotal (TOTDUR_swimComp TOTDUR_swimLeis TOTDUR_swimLeisIn TOTDUR_swimLeisOut TOTDUR_backPackMountainClimb ///
587     TOTDUR_walkPleasure TOTDUR_cyclingRacingRough TOTDUR_cyclePleasure TOTDUR_mowing TOTDUR_waterLawn ///
588     TOTDUR_heavyGardening TOTDUR_weedPrune TOTDUR_dIY TOTDUR_Household TOTDUR_aerobicsHigh TOTDUR_aerobicsOther ///
589     TOTDUR_exerciseWeights TOTDUR_conditionExercise TOTDUR_floorExercise TOTDUR_dancing TOTDUR_compRun TOTDUR_jog ///
590     TOTDUR_bowling TOTDUR_bowlingIn TOTDUR_bowlingOut TOTDUR_tennisBadminton TOTDUR_tennisIn TOTDUR_tennisOut ///
591     TOTDUR_badminton TOTDUR_squash TOTDUR_tableTennis TOTDUR_golf TOTDUR_footballRugbyHockey TOTDUR_footRugHockIn ///
592     TOTDUR_footRugHockOut TOTDUR_cricket TOTDUR_rowing TOTDUR_netVolleyBasketBall TOTDUR_netVolBasketIn ///
593     TOTDUR_netVolBasketOut TOTDUR_huntingShootingFish TOTDUR_horseBased TOTDUR_snookerBillardsDarts ///
594     TOTDUR_musicalInstrumentSing TOTDUR_iceSkating TOTDUR_Skiing TOTDUR_sailingWindsurfBoat TOTDUR_combatsSports ///
595     TOTDUR_ActiveComputerGames) if MISSINGC == 2
596
597     ***************************
598     /* re-weights total reported activities per day if total is greater than 18hrs per day */
599     ***************************
600     gen TVadj = DURTV
601     gen COMPadj = DURCOMP
602     gen JOBadj = DURJOB
603     gen CARadj = DURCAR
604     gen PUBLICadj = DURPUBLIC
605     gen CYCLEadj = DURCYCLE
606     gen WALKadj = DURWALK
607     gen LEISadj = DURATIONLEIS
608     gen STAIRadj = DURSTAIRFLIGHT
609     egen DURATIONINI = rowtotal(TVadj COMPadj JOBadj CARadj STAIRadj PUBLICadj CYCLEadj WALKadj LEISadj) if (MISSINGA == 2 | MISSINGCOMMUT == 2 | MISSINGJOB == 2 | MISSINGC == 2)
610
611     replace TVadj = DURTV*18/DURATIONINI if DURATIONINI > 18
612     replace COMPadj = DURCOMP*18/DURATIONINI if DURATIONINI > 18
```

```
613     replace STAIRadj = DURSTAIRFLIGHT*18/DURATIONINI if DURATIONINI > 18
614     replace JOBadj= DURJOB*18/DURATIONINI if DURATIONINI > 18
615     replace CARadj = DURCAR*18/DURATIONINI if DURATIONINI > 18
616     replace PUBLICadj = DURPUBLIC*18/DURATIONINI if DURATIONINI > 18
617     replace CYCLEadj = DURCYCLE*18/DURATIONINI if DURATIONINI > 18
618     replace WALKadj = DURWALK*18/DURATIONINI if DURATIONINI > 18
619
620     foreach x in TOTDUR_swimComp TOTDUR_swimLeis TOTDUR_swimLeisIn TOTDUR_swimLeisOut TOTDUR_backPackMountainClimb ///
621     TOTDUR_walkPleasure TOTDUR_cyclingRacingRough TOTDUR_cyclePleasure TOTDUR_mowing TOTDUR_waterLawn ///
622     TOTDUR_heavyGardening TOTDUR_weedPrune TOTDUR_dIY TOTDUR_Household TOTDUR_aerobicsHigh TOTDUR_aerobicsOther ///
623     TOTDUR_exerciseWeights TOTDUR_conditionExercise TOTDUR_floorExercise TOTDUR_dancing TOTDUR_compRun TOTDUR_jog ///
624     TOTDUR_bowling TOTDUR_bowlingIn TOTDUR_bowlingOut TOTDUR_tennisBadminton TOTDUR_tennisIn TOTDUR_tennisOut ///
625     TOTDUR_badminton TOTDUR_squash TOTDUR_tableTennis TOTDUR_golf TOTDUR_footballRugbyHockey TOTDUR_footRugHockIn ///
626     TOTDUR_footRugHockOut TOTDUR_cricket TOTDUR_rowing TOTDUR_netVolleyBasketBall TOTDUR_netVolBasketIn ///
627     TOTDUR_netVolBasketOut TOTDUR_huntingShootingFish TOTDUR_horseBased TOTDUR_snookerBillardsDarts ///
628     TOTDUR_musicalInstrumentSing TOTDUR_iceSkating TOTDUR_Skiing TOTDUR_sailingWindsurfBoat TOTDUR_combatsSports ///
629     TOTDUR_ActiveComputerGames {
630         gen `x'a = `x' /*variables postfixed with "a" stands for adjusted variable*/
631         replace `x'a = `x'*18/DURATIONINI if DURATIONINI > 18
632     }
633
634     ***************************
635     /* Calculating sleep time based on max reported hours of activities */
636     /* AH= Remaining time - Time not accounted for by RPAQ */
637     ***************************
638
639     gen UNACCOUNTED = .
640
641     gen SLEEP = .
642     replace SLEEP = 6 if DURATIONINI > 18
643     replace SLEEP = 24-DURATIONINI if DURATIONINI <= 18 & DURATIONINI > 16
644     replace SLEEP = 8 if DURATIONINI <= 16
645
646
647     replace UNACCOUNTED = 24 -(DURATIONINI+8) if DURATIONINI <= 16
648     replace UNACCOUNTED = 24-DURATIONINI - SLEEP if DURATIONINI <= 18 & DURATIONINI > 16
649     replace UNACCOUNTED = 0 if DURATIONINI > 18
650
651
652     *generate adjusted durations for each domain considering maximum value of 18 for total activities
653
654     *HOME
655     egen HOMEtime = rowtotal(TVadj COMPadj STAIRadj TOTDUR_Householda TOTDUR_mowinga TOTDUR_waterLawna TOTDUR_heavyGardeninga ///
656     TOTDUR_weedPrunea TOTDUR_dIYa) if MISSINGA == 2
657
658     *WORK
659     gen WORKtime = JOBadj if MISSINGJOB == 2
660
661     *COMMUTING
662     egen COMMUTEtime = rowtotal(CARadj PUBLICadj CYCLEadj WALKadj) if MISSINGCOMMUT == 2
663
664     *LEISURE
665     egen LEIStime = rowtotal(TOTDUR_swimCompa TOTDUR_swimLeisa TOTDUR_swimLeisIna TOTDUR_swimLeisOuta TOTDUR_backPackMountainClimba ///
666     TOTDUR_walkPleasurea TOTDUR_cyclingRacingRougha TOTDUR_cyclePleasurea TOTDUR_aerobicsHigha TOTDUR_aerobicsOthera ///
667     TOTDUR_exerciseWeightsa TOTDUR_conditionExercisea TOTDUR_floorExercisea TOTDUR_dancinga TOTDUR_compRuna TOTDUR_joga ///
668     TOTDUR_bowlinga TOTDUR_bowlingIna TOTDUR_bowlingOuta TOTDUR_tennisBadmintona TOTDUR_tennisIna TOTDUR_tennisOuta ///
669     TOTDUR_badmintona TOTDUR_squasha TOTDUR_tableTennisa TOTDUR_golfa TOTDUR_footballRugbyHockeya TOTDUR_footRugHockIna ///
670     TOTDUR_footRugHockOuta TOTDUR_cricketa TOTDUR_rowinga TOTDUR_netVolleyBasketBalla TOTDUR_netVolBasketIna ///
671     TOTDUR_netVolBasketOuta TOTDUR_huntingShootingFisha TOTDUR_horseBaseda TOTDUR_snookerBillardsDartsa ///
672     TOTDUR_musicalInstrumentSinga TOTDUR_iceSkatinga TOTDUR_Skiinga TOTDUR_sailingWindsurfBoata TOTDUR_combatsSportsa ///
673     TOTDUR_ActiveComputerGamesa) if MISSINGC == 2
674
675     egen TOTALtime = rowtotal(HOMEtime WORKtime COMMUTEtime LEIStime SLEEP)
676     *TOTALtime always = 24 (minus AH)
677
678     ************************************************************
679     /* Calculation of MET scores as per Ainsworth's PA Compendium */
680     ************************************************************
```

```
681       /* Home section */
682       gen SCORETV = TVadj
683       gen SCORECOMP = COMPadj //redefined to be a MET score of 1 (as active computer use has been removed).
684       *stairs is halfway between 8 for going up and 3 for going down
685       gen SCORESTAIRS = STAIRadj*5.5
686       /*Home Activites from Recreation Section*/
687       gen SCOREHOUSEHOLD = TOTDUR_Householda * 2.3 // new for v10: Light Cleaning
688       gen SCORELAWN = TOTDUR_mowinga *5.5
689       gen SCOREWATER = TOTDUR_waterLawna *1.5
690       gen SCOREDIG = TOTDUR_heavyGardeninga *6
691       gen SCOREWEED = TOTDUR_weedPrunea *4.5
692       gen SCOREDIY = TOTDUR_dIYa *4.5
693
694       egen SCOREHOME = rowtotal(SCORETV SCORECOMP SCORESTAIRS SCOREHOUSEHOLD SCORELAWN SCOREWATER SCOREDIG SCOREWEED SCOREDIY)
695
696       replace SCOREHOME = . if MISSINGA == 1
697
698       /* Work section */
699
700       *worktype assigned as 1 (median in Fenland dataset) where worktype is missing but time in work reported
701
702       *original:
703       /*
704       local sed_met = 1.5
705       local stand_met = 2.3
706       local man_met = 3.5
707       local heavyman_met = 5.5
708       */
709
710       *Based on Fenland analysis 2015 (see relevant references in header)
711
712       local sed_met = 1.54
713       local stand_met = 1.74
714       local man_met = 1.93
715       local heavyman_met = 2.20
716
717       gen SCOREJOB = . if MISSINGJOB == 1
718       replace SCOREJOB = 0 if JOBadj == 0
719       replace SCOREJOB = `sed_met'*JOBadj if JOBadj > 0 & (Worktype_CLEAN == . | Worktype_CLEAN <0)
720       replace SCOREJOB = `sed_met'*JOBadj if Worktype_CLEAN == 1
721       replace SCOREJOB = `stand_met'*JOBadj if Worktype_CLEAN == 2
722       replace SCOREJOB = `man_met'*JOBadj if Worktype_CLEAN == 3
723       replace SCOREJOB = `heavyman_met'*JOBadj if Worktype_CLEAN == 4
724
725       /* Commuting section */
726       gen SCORECAR = 1.5*CARadj   /*Compendium says driving 2METs, riding 1MET*/
727       gen SCOREPUBLIC = PUBLICadj
728       gen SCORECYCLE = 6*CYCLEadj
729       gen SCOREWALK = 3.3*WALKadj
730       egen SCORECOMMUTE = rowtotal(SCORECAR SCOREPUBLIC SCORECYCLE SCOREWALK)
731       replace SCORECOMMUTE = . if MISSINGCOMMUT == 1
732
733       *Generate MET scores for LTPA variables
734       /* Recreation section */
735       gen SCORELAPSWI = TOTDUR_swimCompa *10
736       gen SCORELESSWI = TOTDUR_swimLeisa *6
737       gen SCORELESSWIIN = TOTDUR_swimLeisIna *6
738       gen SCORELESSWIOUT = TOTDUR_swimLeisOuta *6
739       gen SCOREBAKPAK = TOTDUR_backPackMountainClimba *7
740       gen SCOREWALKPLEASURE = TOTDUR_walkPleasurea *3.5
741       gen SCORECYCRAC = TOTDUR_cyclingRacingRougha *10
742       gen SCORECYCPLE = TOTDUR_cyclePleasurea *4
743       gen SCORESTEP = TOTDUR_aerobicsHigha *7
744       gen SCOREAERO = TOTDUR_aerobicsOthera *5
745       gen SCOREWGHT = TOTDUR_exerciseWeightsa *3
746       gen SCOREEXER = TOTDUR_conditionExercisea *5.5
747       gen SCOREFLOOR = TOTDUR_floorExercisea *4
748       gen SCOREDANCE = TOTDUR_dancinga *4.5
```

```
749       gen SCORECOMRUN = TOTDUR_compRuna *12.5
750       gen SCOREJOG = TOTDUR_joga *7
751       gen SCOREBOWL = TOTDUR_bowlinga *3
752       gen SCOREBOWLIN = TOTDUR_bowlingIna *3
753       gen SCOREBOWLOUT = TOTDUR_bowlingOuta *3
754       gen SCORETENBAD = TOTDUR_tennisBadmintona *6
755       gen SCORETENIN = TOTDUR_tennisIna *6
756       gen SCORETENOUT = TOTDUR_tennisOuta *6
757       gen SCOREBAD = TOTDUR_badmintona *6
758       gen SCORESQUASH = TOTDUR_squasha *12
759       gen SCORETABTEN = TOTDUR_tableTennisa *4
760       gen SCOREGOLF = TOTDUR_golfa *4.5
761       gen SCOREFOOT = TOTDUR_footballRugbyHockeya *8
762       gen SCOREFOOTIN = TOTDUR_footRugHockIna *8
763       gen SCOREFOOTOUT = TOTDUR_footRugHockOuta *8
764       gen SCORECRICK = TOTDUR_cricketa *5
765       gen SCOREROW = TOTDUR_rowinga *7
766       gen SCORENET = TOTDUR_netVolleyBasketBalla *5.5
767       gen SCORENETIN = TOTDUR_netVolBasketIna *5.5
768       gen SCORENETOUT = TOTDUR_netVolBasketOuta *5.5
769       gen SCOREFISH = TOTDUR_huntingShootingFisha *3
770       gen SCOREHORSE = TOTDUR_horseBaseda *4
771       gen SCORESNOOK = TOTDUR_snookerBillardsDartsa *2.5
772       gen SCOREMUSIC = TOTDUR_musicalInstrumentSinga *2.7
773       gen SCORESKATE = TOTDUR_iceSkatinga *7
774       gen SCORESKI = TOTDUR_Skiinga * 6 // new for v10
775       gen SCORESAIL = TOTDUR_sailingWindsurfBoata *3
776       gen SCOREBOX = TOTDUR_combatsSportsa*10
777       gen SCOREACTCOMP = TOTDUR_ActiveComputerGamesa*2.3 // new for v10: Activity promoting video games light effort
778
779       egen SCORELEIS = rowtotal(SCORELAPSWI SCORELESSWI SCORELESSWIIN SCORELESSWIOUT SCOREBAKPAK SCOREWALKPLEASURE SCORECYCRAC SCORECYCPLE  ///
780       SCORESTEP SCOREAERO SCOREWGHT SCOREEXER SCOREFLOOR SCOREDANCE SCORECOMRUN SCOREJOG SCOREBOWL SCOREBOWLIN SCOREBOWLOUT SCORETENBAD ///
781       SCORETENIN SCORETENOUT SCOREBAD SCORESQUASH SCORETABTEN SCOREGOLF SCOREFOOT SCOREFOOTIN SCOREFOOTOUT SCORECRICK SCOREROW ///
782       SCORENET SCORENETIN SCORENETOUT SCOREFISH SCOREHORSE SCORESNOOK SCOREMUSIC SCORESKATE SCORESKI SCORESAIL SCOREBOX SCOREACTCOMP)
783
784       replace SCORELEIS = . if MISSINGC == 1
785
786       *Score Unaccounted time according to getting about mode (assumption being that this is a marker for energy cost of activities not captured)
787       gen SCORE_UNACCOUNTED = UNACCOUNTED * 1
788       replace SCORE_UNACCOUNTED = UNACCOUNTED * 1.3 if Gettingabout_CLEAN ==2 | Gettingabout_CLEAN ==4
789
790       /* Total score */
791
792       egen TOTMETHRS = rowtotal(SCOREHOME SCOREJOB SCORECOMMUTE SCORELEIS) if MISSING == 2 /*awake-time only*/
793       egen TOTMETHRS_w_UNACCtime = rowtotal(SCOREHOME SCOREJOB SCORECOMMUTE SCORELEIS SCORE_UNACCOUNTED) if MISSING == 2 /*awake-time only*/
794
795       egen TOTtime = rowtotal(HOMEtime WORKtime COMMUTEtime LEIStime)
796
797       gen ACTMETS = TOTMETHRS - TOTtime*1
798       gen ACTMETS_w_UNACCtime = TOTMETHRS_w_UNACCtime - (24-SLEEP)*1
799       *difference between the two scores is the assignment of energy to unaccounted for time; the first score assigns 1MET to all unaccounted for time and the second assigns 1.3MET to unaccounted for time if
    the person reports getting about actively
800
801       gen HOME_METS = SCOREHOME
802       gen WORK_METS = SCOREJOB
803       gen LEIS_METS = SCORELEIS
804       gen COMMUTE_METS = SCORECOMMUTE
805
806       gen HOME_ACTMETS = SCOREHOME - HOMEtime
807       gen WORK_ACTMETS = SCOREJOB - WORKtime
808       gen LEIS_ACTMETS = SCORELEIS - LEIStime
809       gen COMMUTE_ACTMETS = SCORECOMMUTE - COMMUTEtime
810
811       *Convert MET HRS per day to kJ/kg/day. Multiply by 60 to get to MET minutes (which cancels out minutes), multiply by 3.5 * 20.35 to convert to J.
812       gen PAEE = ACTMETS * 3.5 * 20.35 * 60 / 1000
813       gen HOME_PAEE = HOME_ACTMETS * 3.5 * 20.35 * 60 / 1000
814       gen WORK_PAEE = WORK_ACTMETS * 3.5 * 20.35 * 60 / 1000
815       gen LEIS_PAEE = LEIS_ACTMETS * 3.5 * 20.35 * 60 / 1000
```

```
gen COMMUTE_PAEE = COMMUTE_ACTMETS * 3.5 * 20.35 * 60 / 1000

*ENERGY SPENT AT DIFFERENT INTENSITIES
*SPA: <=1.5 METs, not including sleep
egen SED_INTENSITY  = rowtotal(SCORETV SCORECOMP SCORECAR SCOREPUBLIC)
egen SED_INTENSITY2 = rowtotal(SCORETV SCORECOMP SCORECAR SCOREPUBLIC SCOREJOB)
replace SED_INTENSITY = SED_INTENSITY2 if Worktype_CLEAN == 1
drop SED_INTENSITY2

*LPA: 1.5001-2.99 METs
egen LIGHT_INTENSITY  = rowtotal(SCOREWATER SCORESNOOK SCOREMUSIC SCOREHOUSEHOLD SCOREACTCOMP)
egen LIGHT_INTENSITY2 = rowtotal(SCOREWATER SCORESNOOK SCOREMUSIC SCOREHOUSEHOLD SCOREACTCOMP SCOREJOB)
replace LIGHT_INTENSITY = LIGHT_INTENSITY2 if Worktype_CLEAN == 2
drop LIGHT_INTENSITY2

*MPA: 3-5.99 METs
*includes digging and commute cycling
egen MODERATE_INTENSITY  = rowtotal(SCORESTAIRS SCOREWALK SCORECYCLE SCORELESSWI SCORELESSWIIN SCORELESSWIOUT SCOREWALKPLEASURE SCORECYCPLE ///
                                    SCORELAWN SCOREDIG SCOREWEED SCOREDIY SCOREAERO SCOREWGHT SCOREEXER SCOREFLOOR SCOREDANCE SCOREBOWL ///
                                    SCOREBOWLIN SCOREBOWLOUT SCORETENBAD SCORETENIN SCORETENOUT SCOREBAD SCORETABTEN SCOREGOLF ///
                                    SCORECRICK SCORENET SCORENETIN SCORENETOUT SCOREFISH SCOREHORSE SCORESAIL)
egen MODERATE_INTENSITY2 = rowtotal(SCORESTAIRS SCOREWALK SCORECYCLE SCORELESSWI SCORELESSWIIN SCORELESSWIOUT SCOREWALKPLEASURE SCORECYCPLE ///
                                    SCORELAWN SCOREDIG SCOREWEED SCOREDIY SCOREAERO SCOREWGHT SCOREEXER SCOREFLOOR SCOREDANCE SCOREBOWL ///
                                    SCOREBOWLIN SCOREBOWLOUT SCORETENBAD SCORETENIN SCORETENOUT SCOREBAD SCORETABTEN SCOREGOLF ///
                                    SCORECRICK SCORENET SCORENETIN SCORENETOUT SCOREFISH SCOREHORSE SCORESAIL SCOREJOB)
replace MODERATE_INTENSITY = MODERATE_INTENSITY2 if Worktype_CLEAN == 3
drop MODERATE_INTENSITY2

*VPA: >=6 METs
egen VIGOROUS_INTENSITY  = rowtotal(SCORELAPSWI SCOREBAKPAK SCORECYCRAC SCORESTEP SCORECOMRUN SCOREJOG SCORESQUASH SCOREFOOT SCOREFOOTIN ///
                                    SCOREFOOTOUT SCOREROW SCORESKATE SCOREBOX SCORESKI)
egen VIGOROUS_INTENSITY2 = rowtotal(SCORELAPSWI SCOREBAKPAK SCORECYCRAC SCORESTEP SCORECOMRUN SCOREJOG SCORESQUASH SCOREFOOT SCOREFOOTIN ///
                                    SCOREFOOTOUT SCOREROW SCORESKATE SCOREBOX SCORESKI SCOREJOB)
replace VIGOROUS_INTENSITY = VIGOROUS_INTENSITY2 if Worktype_CLEAN == 4
drop VIGOROUS_INTENSITY2

* TIME SPENT AT DIFFERENT INTENSITIES
*Time spent in SPA (<=1.5 METs, not including sleep)
egen SEDtime = rowtotal(TVadj COMPadj CARadj PUBLICadj)
egen SEDtime2 = rowtotal(TVadj COMPadj CARadj PUBLICadj JOBadj)
replace SEDtime = SEDtime2 if Worktype_CLEAN == 1
drop SEDtime2

*Time spent in LPA: 1.5001-2.99 METs
egen LIGHTtime  = rowtotal(TOTDUR_waterLawna TOTDUR_snookerBillardsDartsa TOTDUR_musicalInstrumentSinga TOTDUR_ActiveComputerGamesa ///
                           TOTDUR_Householda)
egen LIGHTtime2 = rowtotal(TOTDUR_waterLawna TOTDUR_snookerBillardsDartsa TOTDUR_musicalInstrumentSinga TOTDUR_ActiveComputerGamesa ///
                           TOTDUR_Householda JOBadj)
replace LIGHTtime = LIGHTtime2 if Worktype_CLEAN == 2
drop LIGHTtime2

*Time spent in MPA: 3-5.99 METs
egen MODERATEtime = rowtotal(STAIRadj WALKadj CYCLEadj TOTDUR_swimLeisa TOTDUR_swimLeisIna TOTDUR_swimLeisOuta TOTDUR_walkPleasurea ///
                             TOTDUR_cyclePleasurea TOTDUR_mowinga TOTDUR_heavyGardeninga TOTDUR_weedPrunea TOTDUR_dIYa TOTDUR_aerobicsOthera ///
                             TOTDUR_exerciseWeightsa TOTDUR_conditionExercisea TOTDUR_floorExercisea TOTDUR_dancinga TOTDUR_bowlinga ///
                             TOTDUR_bowlingIna TOTDUR_bowlingOuta TOTDUR_tennisBadmintona TOTDUR_tennisIna TOTDUR_tennisOuta ///
                             TOTDUR_badmintona TOTDUR_tableTennisa TOTDUR_golfa TOTDUR_cricketa TOTDUR_netVolleyBasketBalla ///
                             TOTDUR_netVolBasketIna TOTDUR_netVolBasketOuta TOTDUR_huntingShootingFisha TOTDUR_horseBaseda ///
                             TOTDUR_sailingWindsurfBoata)
egen MODERATEtime2 = rowtotal(STAIRadj WALKadj CYCLEadj TOTDUR_swimLeisa TOTDUR_swimLeisIna TOTDUR_swimLeisOuta TOTDUR_walkPleasurea ///
                             TOTDUR_cyclePleasurea TOTDUR_mowinga TOTDUR_heavyGardeninga TOTDUR_weedPrunea TOTDUR_dIYa TOTDUR_aerobicsOthera ///
                             TOTDUR_exerciseWeightsa TOTDUR_conditionExercisea TOTDUR_floorExercisea TOTDUR_dancinga TOTDUR_bowlinga ///
                             TOTDUR_bowlingIna TOTDUR_bowlingOuta TOTDUR_tennisBadmintona TOTDUR_tennisIna TOTDUR_tennisOuta ///
                             TOTDUR_badmintona TOTDUR_tableTennisa TOTDUR_golfa TOTDUR_cricketa TOTDUR_netVolleyBasketBalla ///
                             TOTDUR_netVolBasketIna TOTDUR_netVolBasketOuta TOTDUR_huntingShootingFisha TOTDUR_horseBaseda ///
                             TOTDUR_sailingWindsurfBoata JOBadj)
replace MODERATEtime = MODERATEtime2 if Worktype_CLEAN == 3
drop MODERATEtime2
```

```
884
885       *Time spent in VPA: >=6 METs
886       egen VIGOROUStime = rowtotal(TOTDUR_swimCompa TOTDUR_backPackMountainClimba TOTDUR_cyclingRacingRougha TOTDUR_aerobicsHigha ///
887                                    TOTDUR_compRuna TOTDUR_joga TOTDUR_squasha TOTDUR_footballRugbyHockeya TOTDUR_footRugHockIna ///
888                                    TOTDUR_footRugHockOuta TOTDUR_rowinga TOTDUR_iceSkatinga TOTDUR_combatsSportsa TOTDUR_Skiinga)
889       egen VIGOROUStime2 = rowtotal(TOTDUR_swimCompa TOTDUR_backPackMountainClimba TOTDUR_cyclingRacingRougha TOTDUR_aerobicsHigha ///
890                                    TOTDUR_compRuna TOTDUR_joga TOTDUR_squasha TOTDUR_footballRugbyHockeya TOTDUR_footRugHockIna ///
891                                    TOTDUR_footRugHockOuta TOTDUR_rowinga TOTDUR_iceSkatinga TOTDUR_combatsSportsa TOTDUR_Skiinga JOBadj)
892       replace VIGOROUStime = VIGOROUStime2 if Worktype_CLEAN == 4
893       drop VIGOROUStime2
894
895       *********************************
896       *** LABELLING OF KEY VARIABLES ***
897       *********************************
898       label var TOTMETHRS "Total reported duration (hours) of activity times intensity (MET) [METhrs/d]"
899       label var TOTMETHRS_w_UNACCtime  "Total reported plus unaccounted duration hours) times intensity (MET) [METhrs/d]"
900       label var TOTtime "Total reported duration (hours) of activity [hrs/d]"
901       label var TOTALtime "Total reported duration (hours) of activity + assumed sleep [hrs/d]"
902       label var ACTMETS "Total activity energy expenditure discounting resting [net METhrs/d]"
903       label var ACTMETS_w_UNACCtime "Activity EE incl AEE for unaccounted time for active getting about [net METhrs/d]"
904       label var PAEE "Physical activity energy expenditure [kJ/kg/d]"
905
906       label var HOME_METS "Home domain energy expenditure [METhrs/d]"
907       label var WORK_METS "Work domain energy expenditure [METhrs/d]"
908       label var LEIS_METS "Leisure domain energy expenditure [METhrs/d]"
909       label var COMMUTE_METS "Commute domain energy expenditure [METhrs/d]"
910       label var HOME_ACTMETS "Home domain activity energy expenditure [net METhrs/d]"
911       label var WORK_ACTMETS "Work domain activity energy expenditure [net METhrs/d]"
912       label var LEIS_ACTMETS "Leisure domain activity energy expenditure [net METhrs/d]"
913       label var COMMUTE_ACTMETS "Commute domain activity energy expenditure [net METhrs/d]"
914       label var HOME_PAEE "Home domain activity energy expenditure [kJ/kg/d]"
915       label var WORK_PAEE "Work domain activity energy expenditure [kJ/kg/d]"
916       label var LEIS_PAEE "Leisure domain activity energy expenditure [kJ/kg/d]"
917       label var COMMUTE_PAEE "Commute domain activity energy expenditure [kJ/kg/d]"
918
919       label var SED_INTENSITY "Sedentary behavior energy expenditure [METhrs/d]"
920       label var LIGHT_INTENSITY "Light intensity energy expenditure [METhrs/d]"
921       label var MODERATE_INTENSITY "Moderate intensity energy expenditure [METhrs/d]"
922       label var VIGOROUS_INTENSITY "Vigorous intensity energy expenditure [METhrs/d]"
923       label var SEDtime "Time spent sedentary, excluding sleep [hrs/d]"
924       label var LIGHTtime "Time spent at light intensity activity [hrs/d]"
925       label var MODERATEtime "Time spent at moderate intensity activity [hrs/d]"
926       label var VIGOROUStime "Time spent at vigorous intensity activity [hrs/d]"
927
928       order ISerial template
929
930       *** SAVING THE OUTPUT ***
931       nois di in red "$OUTPUT_FOLDER/`YEAR'_$OUTPUT_SUFFIX"
932       save "$OUTPUT_FOLDER/`YEAR'_$OUTPUT_SUFFIX.dta", replace
933       outsheet using "$OUTPUT_FOLDER/`YEAR'_$OUTPUT_SUFFIX.csv", comma replace
934
935       *This is now the most up to date version of RPAQ data with METs generated that is to be used for analyses.
936
937       set more off
938       nois di "Listing extreme PAEE values"
939       nois list ISerial PAEE WORK_PAEE Worktype_CLEAN WORKtime LEIStime LIGHTtime MODERATEtime VIGOROUStime if WORK_PAEE> 120 & WORK_PAEE!=.
940       nois list ISerial PAEE LEIS_PAEE LEIStime LIGHTtime MODERATEtime VIGOROUStime if LEIS_PAEE> 120 & LEIS_PAEE!=.
941
942       restore
943   }
```