```
*****************************************************************************************************************
*     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 V2.0 (Y12 plus - using MRC webforms)                                                *
*   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 V2.0 (Y12 plus - using MRC webforms):
Updated to process Y12 and above for NDNS RPAQ data.
For data harmonisation, Active computer games, household and skiing have been set to 0 when calculating TOTDUR (see
line 625). This will leave the original data in the dataset, but removed its values from final calculations.

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

timer clear 1
timer on 1

************************
*** 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
keep 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  Screenweekdaypre6pm_CLEAN Screenweekdaypost6pm_CLEAN Screenweekendpre6pm_CLEAN ///
Screenweekendpost6pm_CLEAN Stairweekday_CLEAN Stairweekend_CLEAN Paidemployment_CLEAN Work4wkago_CLEAN ///
Work4wkagoHr_CLEAN Work4wkagoMin_CLEAN Work4wkagoReason_CLEAN Work3wkago_CLEAN Work3wkagoHr_CLEAN ///
Work3wkagoMin_CLEAN Work3wkagoReason_CLEAN Work2wkago_CLEAN Work2wkagoHr_CLEAN Work2wkagoMin_CLEAN ///
Work2wkagoReason_CLEAN Work1wkago_CLEAN Work1wkagoHr_CLEAN Work1wkagoMin_CLEAN Work1wkagoReason_CLEAN ///
Worktype_CLEAN Wrkmiles_CLEAN Wrkkms_CLEAN Wrktimesperweek_CLEAN Daysweekday_CLEAN Daysweekendday_CLEAN ///
HomeWorkerMultipleLocs_CLEAN Wrkbycar_CLEAN Wrkbypubtran_CLEAN Wrkbybicycle_CLEAN Wrkbyfoot_CLEAN swimComp_CLEAN ///
swimCompHr_CLEAN swimCompMin_CLEAN swimLeis_CLEAN swimLeisHr_CLEAN swimLeisMin_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 tennisBadminton_CLEAN tennisBadmintonHr_CLEAN tennisBadmintonMin_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 cricket_CLEAN ///
cricketHr_CLEAN cricketMin_CLEAN rowing_CLEAN rowingHr_CLEAN rowingMin_CLEAN netVolleyBasketBall_CLEAN ///
netVolleyBasketBallHr_CLEAN netVolleyBasketBallMin_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)

qui foreach YEAR in `YEARS' {
    nois di "`YEAR'"

    preserve

```

```
137     keep if StudyYr == "`YEAR'"
138     count
139
140     local N=r(N)
141     if `N'<1000 {
142         * This dataset includes less than 1000 individuals.
143         * Please note that in many cases, missing values will be imputed using in-sample median values for those particular variables.
144         * If you are happy with this approach, just comment out the stop line below (add "*" at beginning of line) and rerun the script.
145         *stop
146     }
147
148     /*
149     //variables removed from earlier RPAQ processing as now have Screen time variables for V11 +
150     Mediaweekdaypre6pm_CLEAN Mediaweekdaypost6pm_CLEAN Mediaweekendpre6pm_CLEAN Mediaweekendpost6pm_CLEAN ///
151     Computerweekdaypre6pm_CLEAN Computerweekdaypost6pm_CLEAN Computerweekendpre6pm_CLEAN Computerweekendpost6pm_CLEAN ///
152     */
153
154     *replace data entered as invalid (contains bracket) with system missing value
155     foreach var in QVersion_CLEAN Gettingabout_CLEAN  ///
156     Screenweekdaypre6pm_CLEAN Screenweekdaypost6pm_CLEAN Screenweekendpre6pm_CLEAN Screenweekendpost6pm_CLEAN ///
157     Stairweekday_CLEAN Stairweekend_CLEAN Work4wkago_CLEAN Work3wkago_CLEAN Work2wkago_CLEAN Work1wkago_CLEAN Worktype_CLEAN ///
158     Wrkmiles_CLEAN Wrkkms_CLEAN Wrktimesperweek_CLEAN Wrkbycar_CLEAN Wrkbypubtran_CLEAN Wrkbybicycle_CLEAN Wrkbyfoot_CLEAN ///
159     swimComp_CLEAN swimCompHr_CLEAN swimCompMin_CLEAN swimLeis_CLEAN swimLeisHr_CLEAN swimLeisMin_CLEAN ///
160     backPackMountainClimb_CLEAN backPackMountainClimbHr_CLEAN backPackMountainClimbMin_CLEAN walkPleasure_CLEAN walkPleasureHr_CLEAN walkPleasureMin_CLEAN ///
161     cyclingRacingRough_CLEAN cyclingRacingRoughHr_CLEAN cyclingRacingRoughMin_CLEAN cyclePleasure_CLEAN cyclePleasureHr_CLEAN cyclePleasureMin_CLEAN ///
162     mowing_CLEAN mowingHr_CLEAN mowingMin_CLEAN waterLawn_CLEAN waterLawnHr_CLEAN waterLawnMin_CLEAN ///
163     heavyGardening_CLEAN heavyGardeningHr_CLEAN heavyGardeningMin_CLEAN weedPrune_CLEAN weedPruneHr_CLEAN weedPruneMin_CLEAN ///
164     dIY_CLEAN dIYHr_CLEAN dIYMin_CLEAN Household_CLEAN HouseholdHr_CLEAN HouseholdMin_CLEAN aerobicsHigh_CLEAN aerobicsHighHr_CLEAN aerobicsHighMin_CLEAN ///
165     aerobicsOther_CLEAN aerobicsOtherHr_CLEAN aerobicsOtherMin_CLEAN exerciseWeights_CLEAN exerciseWeightsHr_CLEAN exerciseWeightsMin_CLEAN ///
166     conditionExercise_CLEAN conditionExerciseHr_CLEAN conditionExerciseMin_CLEAN floorExercise_CLEAN floorExerciseHr_CLEAN floorExerciseMin_CLEAN ///
167     dancing_CLEAN dancingHr_CLEAN dancingMin_CLEAN compRun_CLEAN compRunHr_CLEAN compRunMin_CLEAN jog_CLEAN jogHr_CLEAN jogMin_CLEAN ///
168     bowling_CLEAN bowlingHr_CLEAN bowlingMin_CLEAN tennisBadminton_CLEAN tennisBadmintonHr_CLEAN tennisBadmintonMin_CLEAN  ///
169     squash_CLEAN squashHr_CLEAN squashMin_CLEAN tableTennis_CLEAN tableTennisHr_CLEAN tableTennisMin_CLEAN golf_CLEAN golfHr_CLEAN golfMin_CLEAN ///
170     footballRugbyHockey_CLEAN footballRugbyHockeyHr_CLEAN footballRugbyHockeyMin_CLEAN cricket_CLEAN cricketHr_CLEAN cricketMin_CLEAN ///
171     rowing_CLEAN rowingHr_CLEAN rowingMin_CLEAN netVolleyBasketBall_CLEAN netVolleyBasketBallHr_CLEAN netVolleyBasketBallMin_CLEAN ///
172     huntingShootingFish_CLEAN huntingShootingFishHr_CLEAN huntingShootingFishMin_CLEAN horseBased_CLEAN horseBasedHr_CLEAN horseBasedMin_CLEAN ///
173     snookerBillardsDarts_CLEAN snookerBillardsDartsHr_CLEAN snookerBillardsDartsMin_CLEAN musicalInstrumentSing_CLEAN musicalInstrumentSingHr_CLEAN ///
174     musicalInstrumentSingMin_CLEAN iceSkating_CLEAN iceSkatingHr_CLEAN iceSkatingMin_CLEAN Skiing_CLEAN SkiingHr_CLEAN SkiingMin_CLEAN ///
175     sailingWindsurfBoat_CLEAN sailingWindsurfBoatHr_CLEAN sailingWindsurfBoatMin_CLEAN combatsSports_CLEAN combatsSportsHr_CLEAN  ///
176     combatsSportsMin_CLEAN Paidemployment_CLEAN ActiveComputerGames_CLEAN ActiveComputerGamesHr_CLEAN ActiveComputerGamesMin_CLEAN {
177
178         capture replace `var' = "" if substr(`var',1,1) == "("
179         capture replace `var' = . if substr(`var',1,1) == "("
180         destring `var', replace
181
182     }
183
184     ****************************
185     /* Derivation of variables */
186     ****************************
187     * MISSINGA, data on TV-viewing, computer use and stairclimbing
188     gen MISSINGA = 2
189     * Default is no missingness: MISSINGA=2
190     /*
191     Mediaweekdaypre6pm_CLEAN < 1 & Mediaweekdaypost6pm_CLEAN < 1 & ///
192     Mediaweekendpre6pm_CLEAN < 1 & Mediaweekendpost6pm_CLEAN < 1 & Computerweekdaypre6pm_CLEAN < 1 & ///
193     Computerweekdaypost6pm_CLEAN < 1 & Computerweekendpre6pm_CLEAN < 1 & Computerweekendpost6pm_CLEAN < 1 & ///
194     */
195     replace MISSINGA = 1 if Gettingabout_CLEAN < 1 & Screenweekdaypre6pm_CLEAN < 1 & Screenweekdaypost6pm_CLEAN < 1 & ///
196     Screenweekendpre6pm_CLEAN < 1 & Screenweekendpost6pm_CLEAN < 1 & ///
197     Stairweekday_CLEAN < 1 & Stairweekend_CLEAN < 1
198     * If all data is missing, then MISSINGA=1
199
200     /* MISSINGJOB AND EMPLOYED */
201     gen MISSINGJOB = 2
202     /* Default is no missingness: MISSINGJOB=2 */
203     *MISSINGJOB == 1 also includes individuals who report being (un)employed and who record no work activities. i.e. they are still seen as missing.
204     replace MISSINGJOB = 1 if (Work4wkago_CLEAN < 0 & Work3wkago_CLEAN < 0 & ///
```

```
Work2wkago_CLEAN < 0 & Work1wkago_CLEAN < 0 & (Worktype_CLEAN <1 | Worktype_CLEAN == .))
*rpaqversion 8 has no data on work hours or employment status, but does have worktype data
replace MISSINGJOB = 1 if QVersion_CLEAN == 8 & (Worktype_CLEAN < 1 | Worktype_CLEAN == .)
gen EMPLOYED = .
replace EMPLOYED = 2 if Paidemployment_CLEAN == 2
replace EMPLOYED = 1 if Paidemployment_CLEAN == 1 | MISSINGJOB == 2
* EMPLOYED = 1 if they are in employment
* NDNS Y9-11 data entry for Paidemployment was the same as electronic entry (1 = Yes & 2 = No). Y12 Plus was electronic which
* is the same as above.


/* MISSINGCOMMUT */
gen MISSINGCOMMUT = 2
replace MISSINGCOMMUT = 1 if Wrktimesperweek_CLEAN < 0 & Wrkbycar_CLEAN < 1 & Wrkbypubtran_CLEAN < 1 & ///
Wrkbybicycle_CLEAN < 1 & Wrkbyfoot_CLEAN < 1

/* MISSINGC */
gen MISSINGC = 2

/*
As questions filled in online, nothing can be left without an answer. If using for a different
dataset the code below will need to be unstarred. From the online questionnaire volunteers are asked if they
so the activity, so binary check can be used. As by this point all incomplete participants have been removed
can leave missing C as 2.
*/

/*
replace MISSINGC = 1 if ///
swimComp_CLEAN < 1 & swimCompHr_CLEAN < 0 & swimCompMin_CLEAN < 0 & ///
swimLeis_CLEAN < 1 & swimLeisHr_CLEAN < 0 & swimLeisMin_CLEAN < 0 & ///
backPackMountainClimb_CLEAN < 1 & backPackMountainClimbHr_CLEAN < 0 & backPackMountainClimbMin_CLEAN < 0 & ///
walkPleasure_CLEAN < 1 & walkPleasureHr_CLEAN < 0 & walkPleasureMin_CLEAN < 0 & ///
cyclingRacingRough_CLEAN < 1 & cyclingRacingRoughHr_CLEAN < 0 & cyclingRacingRoughMin_CLEAN < 0 & ///
cyclePleasure_CLEAN < 1 & cyclePleasureHr_CLEAN < 0 & cyclePleasureMin_CLEAN < 0 & ///
mowing_CLEAN < 1 & mowingHr_CLEAN < 0 & mowingMin_CLEAN < 0 & ///
waterLawn_CLEAN < 1 & waterLawnHr_CLEAN < 0 & waterLawnMin_CLEAN < 0 & ///
heavyGardening_CLEAN < 1 & heavyGardeningHr_CLEAN < 0 & heavyGardeningMin_CLEAN < 0 & ///
weedPrune_CLEAN < 1 & weedPruneHr_CLEAN < 0 & weedPruneMin_CLEAN < 0 & ///
dIY_CLEAN < 1 & dIYHr_CLEAN < 0 & dIYMin_CLEAN < 0 & ///
Household_CLEAN < 1 & HouseholdHr_CLEAN < 0 & HouseholdMin_CLEAN < 0 & ///
aerobicsHigh_CLEAN < 1 & aerobicsHighHr_CLEAN < 0 & aerobicsHighMin_CLEAN < 0 & ///
aerobicsOther_CLEAN < 1 & aerobicsOtherHr_CLEAN < 0 & aerobicsOtherMin_CLEAN < 0 & ///
exerciseWeights_CLEAN < 1 & exerciseWeightsHr_CLEAN < 0 & exerciseWeightsMin_CLEAN < 0 & ///
conditionExercise_CLEAN < 1 & conditionExerciseHr_CLEAN < 0 & conditionExerciseMin_CLEAN < 0 & ///
floorExercise_CLEAN < 1 & floorExerciseHr_CLEAN < 0 & floorExerciseMin_CLEAN < 0 & ///
dancing_CLEAN < 1 & dancingHr_CLEAN < 0 & dancingMin_CLEAN < 0 & ///
compRun_CLEAN < 1 & compRunHr_CLEAN < 0 & compRunMin_CLEAN < 0 & ///
jog_CLEAN < 1 & jogHr_CLEAN < 0 & jogMin_CLEAN < 0 & ///
bowling_CLEAN < 1 & bowlingHr_CLEAN < 0 & bowlingMin_CLEAN < 0 & ///
tennisBadminton_CLEAN < 1 &  tennisBadmintonHr_CLEAN < 0 & tennisBadmintonMin_CLEAN < 0 & ///
squash_CLEAN < 1 & squashHr_CLEAN < 0 & squashMin_CLEAN < 0 & ///
tableTennis_CLEAN < 1 & tableTennisHr_CLEAN < 0 & tableTennisMin_CLEAN < 0 & ///
golf_CLEAN < 1 & golfHr_CLEAN < 0 & golfMin_CLEAN < 0 & ///
footballRugbyHockey_CLEAN < 1 & footballRugbyHockeyHr_CLEAN < 0 & footballRugbyHockeyMin_CLEAN < 0 & ///
cricket_CLEAN < 1 & cricketHr_CLEAN < 0 & cricketMin_CLEAN < 0 & ///
rowing_CLEAN < 1 & rowingHr_CLEAN < 0 & rowingMin_CLEAN < 0 & ///
netVolleyBasketBall_CLEAN < 1 & netVolleyBasketBallHr_CLEAN < 0 & netVolleyBasketBallMin_CLEAN < 0 & ///
huntingShootingFish_CLEAN < 1 & huntingShootingFishHr_CLEAN < 0 & huntingShootingFishMin_CLEAN < 0 & ///
horseBased_CLEAN < 1 & horseBasedHr_CLEAN < 0 & horseBasedMin_CLEAN < 0 & ///
snookerBillardsDarts_CLEAN < 1 & snookerBillardsDartsHr_CLEAN < 0 & snookerBillardsDartsMin_CLEAN < 0 & ///
musicalInstrumentSing_CLEAN < 1 & musicalInstrumentSingHr_CLEAN< 0 & musicalInstrumentSingMin_CLEAN < 0 & ///
iceSkating_CLEAN < 1 & iceSkatingHr_CLEAN < 0 & iceSkatingMin_CLEAN < 0 & ///
Skiing_CLEAN < 1 & SkiingHr_CLEAN < 0 & SkiingMin_CLEAN <0 & ///
sailingWindsurfBoat_CLEAN < 1 & sailingWindsurfBoatHr_CLEAN< 0 & sailingWindsurfBoatMin_CLEAN < 0 & ///
combatsSports_CLEAN < 1 & combatsSportsHr_CLEAN < 0 & combatsSportsMin_CLEAN < 0  & ///
ActiveComputerGames_CLEAN < 1 & ActiveComputerGamesHr_CLEAN < 0 & ActiveComputerGamesMin_CLEAN < 0
*/

```

```
// Added in to change any that have done no rec activities but completed online Q (which includes Do none of the above)
// volunteer selects none of the above to skip all activities within a certain section.
//replace MISSINGC = 2 if Donone1_CLEAN == 1 & Donone2_CLEAN == 1 & Donone3_CLEAN == 1 & Donone4_CLEAN == 1 & ///
//Donone5_CLEAN == 1 & Donone6_CLEAN == 1 & Donone7_CLEAN == 1 & MISSINGC == 1 & QVersion_CLEAN >= 11 & QVersion_CLEAN !=.

/* MISSING */
gen MISSING = 2
replace MISSING = 1 if MISSINGJOB == 1 & MISSINGCOMMUT == 1 & MISSINGC == 1

/* CALCULATION OF DAILY DURATIONS */
gen GETABOUT = Gettingabout_CLEAN
replace GETABOUT = 0 if Gettingabout_CLEAN < 1 & MISSINGA == 2
replace GETABOUT = . if Gettingabout_CLEAN < 1 & MISSINGA == 1

if VersionNumber_CLEAN >= 11 & VersionNumber_CLEAN !=. {
    gen SCREENDUR1 = . if Screenweekdaypre6pm_CLEAN < 1 & MISSINGA == 1 /* 'Not completed''*/
    replace SCREENDUR1 = 0 if Screenweekdaypre6pm_CLEAN < 1 & MISSINGA == 2 /* 'Not completed''*/
    replace SCREENDUR1 = 0 if Screenweekdaypre6pm_CLEAN == 1
    replace SCREENDUR1 = 2.5 if Screenweekdaypre6pm_CLEAN == 2
    replace SCREENDUR1 = 7.5 if Screenweekdaypre6pm_CLEAN == 3
    replace SCREENDUR1 = 12.5 if Screenweekdaypre6pm_CLEAN == 4
    replace SCREENDUR1 = 17.5 if Screenweekdaypre6pm_CLEAN == 5
    replace SCREENDUR1 = 22.5 if Screenweekdaypre6pm_CLEAN == 6
    replace SCREENDUR1 = 27.5 if Screenweekdaypre6pm_CLEAN == 7
    replace SCREENDUR1 = 32.5 if Screenweekdaypre6pm_CLEAN == 8
    replace SCREENDUR1 = 37.5 if Screenweekdaypre6pm_CLEAN == 9
    replace SCREENDUR1 = 42.5 if Screenweekdaypre6pm_CLEAN == 10
    gen SCREENDUR2 = . if Screenweekdaypost6pm_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
    replace SCREENDUR2 = 7.5 if Screenweekdaypost6pm_CLEAN < 1 & MISSINGA == 2 /* 'Not completed'*/
    replace SCREENDUR2 = 0 if Screenweekdaypost6pm_CLEAN == 1
    replace SCREENDUR2 = 2.5 if Screenweekdaypost6pm_CLEAN == 2
    replace SCREENDUR2 = 7.5 if Screenweekdaypost6pm_CLEAN == 3
    replace SCREENDUR2 = 12.5 if Screenweekdaypost6pm_CLEAN == 4
    replace SCREENDUR2 = 17.5 if Screenweekdaypost6pm_CLEAN == 5
    replace SCREENDUR2 = 22.5 if Screenweekdaypost6pm_CLEAN == 6
    replace SCREENDUR2 = 27.5 if Screenweekdaypost6pm_CLEAN == 7
    replace SCREENDUR2 = 32.5 if Screenweekdaypost6pm_CLEAN == 8
    replace SCREENDUR2 = 37.5 if Screenweekdaypost6pm_CLEAN == 9
    replace SCREENDUR2 = 42.5 if Screenweekdaypost6pm_CLEAN == 10
    gen SCREENDUR3 = . if Screenweekendpre6pm_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
    replace SCREENDUR3 = 1 if Screenweekendpre6pm_CLEAN < 1  & MISSINGA == 2 /* 'Not completed'*/
    replace SCREENDUR3 = 0 if Screenweekendpre6pm_CLEAN == 1
    replace SCREENDUR3 = 1 if Screenweekendpre6pm_CLEAN == 2
    replace SCREENDUR3 = 3 if Screenweekendpre6pm_CLEAN == 3
    replace SCREENDUR3 = 5 if Screenweekendpre6pm_CLEAN == 4
    replace SCREENDUR3 = 7 if Screenweekendpre6pm_CLEAN == 5
    replace SCREENDUR3 = 9 if Screenweekendpre6pm_CLEAN == 6
    replace SCREENDUR3 = 11 if Screenweekendpre6pm_CLEAN == 7
    replace SCREENDUR3 = 13 if Screenweekendpre6pm_CLEAN == 8
    replace SCREENDUR3 = 15 if Screenweekendpre6pm_CLEAN == 9
    replace SCREENDUR3 = 17 if Screenweekendpre6pm_CLEAN == 10
    gen SCREENDUR4 = . if Screenweekendpost6pm_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
    replace SCREENDUR4 = 5 if Screenweekendpost6pm_CLEAN < 1 & MISSINGA == 2 /* 'Not completed'*/
    replace SCREENDUR4 = 0 if Screenweekendpost6pm_CLEAN == 1
    replace SCREENDUR4 = 1 if Screenweekendpost6pm_CLEAN == 2
    replace SCREENDUR4 = 3 if Screenweekendpost6pm_CLEAN == 3
    replace SCREENDUR4 = 5 if Screenweekendpost6pm_CLEAN == 4
    replace SCREENDUR4 = 7 if Screenweekendpost6pm_CLEAN == 5
    replace SCREENDUR4 = 9 if Screenweekendpost6pm_CLEAN == 6
    replace SCREENDUR4 = 11 if Screenweekendpost6pm_CLEAN == 7
    replace SCREENDUR4 = 13 if Screenweekendpost6pm_CLEAN == 8
    replace SCREENDUR4 = 15 if Screenweekendpost6pm_CLEAN == 9
    replace SCREENDUR4 = 17 if Screenweekendpost6pm_CLEAN == 10
    gen DURSCREEN = (SCREENDUR1+SCREENDUR2+SCREENDUR3+SCREENDUR4)/7
    gen DURTV = .
    gen DURCOMP = .

}
```

```
341
342     /* FLIGHTS OF STAIRS */
343     gen STAIRFLIGHT1 = . if Stairweekday_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
344     replace STAIRFLIGHT1 = 40 if Stairweekday_CLEAN < 1 & MISSINGA == 2 /* 'Not completed'*/
345     replace STAIRFLIGHT1 = 0 if Stairweekday_CLEAN == 1
346     replace STAIRFLIGHT1 = 15 if Stairweekday_CLEAN == 2
347     replace STAIRFLIGHT1 = 40 if Stairweekday_CLEAN == 3
348     replace STAIRFLIGHT1 = 65 if Stairweekday_CLEAN == 4
349     replace STAIRFLIGHT1 = 90 if Stairweekday_CLEAN == 5
350     replace STAIRFLIGHT1 = 115 if Stairweekday_CLEAN == 6
351     gen STAIRFLIGHT2 = . if Stairweekend_CLEAN < 1 & MISSINGA == 1 /* 'Not completed'*/
352     replace STAIRFLIGHT2 = 16 if Stairweekend_CLEAN == . & MISSINGA == 2 /* 'Not completed'*/
353     replace STAIRFLIGHT2 = 0 if Stairweekend_CLEAN == 1
354     replace STAIRFLIGHT2 = 6 if Stairweekend_CLEAN == 2
355     replace STAIRFLIGHT2 = 16 if Stairweekend_CLEAN == 3
356     replace STAIRFLIGHT2 = 26 if Stairweekend_CLEAN == 4
357     replace STAIRFLIGHT2 = 36 if Stairweekend_CLEAN == 5
358     replace STAIRFLIGHT2 = 46 if Stairweekend_CLEAN == 6
359     *assign 10 seconds per flights of stairs
360     gen DURSTAIRFLIGHT = ((STAIRFLIGHT1+STAIRFLIGHT2)/7)/360
361
362
363     /* JOB ACTIVITY */
364     foreach var in Work4wkago_CLEAN Work3wkago_CLEAN ///
365     Work2wkago_CLEAN Work1wkago_CLEAN {
366         replace `var' = . if `var' < 0
367     }
368
369     forvalues i = 1/4 {
370         gen DURATIONJOB`i' = Work`i'wkago_CLEAN
371         replace DURATIONJOB`i' = . if Work`i'wkago_CLEAN < 0
372     }
373
374
375     egen DURATIONJOB = rowtotal(DURATIONJOB1 DURATIONJOB2 DURATIONJOB3 DURATIONJOB4)
376     replace DURATIONJOB = . if DURATIONJOB1 ==. &  DURATIONJOB2 == . & DURATIONJOB3 == . & DURATIONJOB4 == .
377     su DURATIONJOB if MISSINGJOB == 2, detail
378     *version 8 had no work duration question. assigning median to those who answered the worktype question.
379     replace DURATIONJOB = r(p50) if QVersion_CLEAN == 8 & MISSINGJOB == 2
380     *if median not computable, assign 37hrs/wk where worktype is reported but no duration
381     replace DURATIONJOB = 4*37 if Worktype_CLEAN > 0 & Worktype_CLEAN < 5 & (DURATIONJOB <0 | DURATIONJOB ==.)
382     *also assign median where worktype is reported but no duration
383     replace DURATIONJOB = r(p50) if Worktype_CLEAN > 0 & Worktype_CLEAN < 5 & (DURATIONJOB <0 | DURATIONJOB ==.)
384
385     *generate average weekly hours over last 4 weeks
386     replace DURATIONJOB = DURATIONJOB/4
387     *generate average daily hours of work
388     gen DURJOB = DURATIONJOB/7 if DURATIONJOB > 0 & DURATIONJOB <= 84
389     replace DURJOB = 0 if DURATIONJOB == 0
390     *truncate to max 12hrs per day
391     replace DURJOB = 12 if DURATIONJOB > 84 & DURATIONJOB !=.
392
393
394     /* TRANSPORTATION ACTIVITY */
395     gen FREQCARINI = 0 if (Wrkbycar_CLEAN < 1 | Wrkbycar_CLEAN > 4) & MISSINGCOMM == 2 /* 'NOT COMPLETED'*/
396     replace FREQCARINI = 0 if Wrkbycar_CLEAN == 4 /* 'Never or rarely'*/
397     replace FREQCARINI = .25 if Wrkbycar_CLEAN == 3 /* 'Occasionally'*/
398     replace FREQCARINI = .75 if Wrkbycar_CLEAN == 2 /* 'Usually'*/
399     replace FREQCARINI = 1 if Wrkbycar_CLEAN == 1 /* 'Always'*/
400     gen FREQPUBLICINI = 0 if (Wrkbypubtran_CLEAN < 1 | Wrkbypubtran_CLEAN > 4) & MISSINGCOMM == 2 /* 'NOT COMPLETED'*/
401     replace FREQPUBLICINI = 0 if Wrkbypubtran_CLEAN == 4 /* 'Never or rarely'*/
402     replace FREQPUBLICINI = .25 if Wrkbypubtran_CLEAN == 3 /* 'Occasionally'*/
403     replace FREQPUBLICINI = .75 if Wrkbypubtran_CLEAN == 2 /* 'Usually'*/
404     replace FREQPUBLICINI = 1 if Wrkbypubtran_CLEAN == 1 /* 'Always'*/
405     gen FREQCYCLEINI = 0 if (Wrkbybicycle_CLEAN < 1 | Wrkbybicycle_CLEAN > 4) & MISSINGCOMM == 2 /* 'NOT COMPLETED'*/
406     replace FREQCYCLEINI = 0 if Wrkbybicycle_CLEAN == 4 /* 'Never or rarely'*/
407     replace FREQCYCLEINI = .25 if Wrkbybicycle_CLEAN == 3 /* 'Occasionally'*/
408     replace FREQCYCLEINI = .75 if Wrkbybicycle_CLEAN == 2 /* 'Usually'*/
```

```
409     replace FREQCYCLEINI = 1 if Wrkbybicycle_CLEAN == 1 /* 'Always'*/
410     gen FREQWALKINI = 0 if (Wrkbyfoot_CLEAN < 1 | Wrkbyfoot_CLEAN > 4) & MISSINGCOMM == 2 /* 'NOT COMPLETED'*/
411     replace FREQWALKINI = 0 if Wrkbyfoot_CLEAN == 4 /* 'Never or rarely'*/
412     replace FREQWALKINI = .25 if Wrkbyfoot_CLEAN == 3 /* 'Occasionally'*/
413     replace FREQWALKINI = .75 if Wrkbyfoot_CLEAN == 2 /* 'Usually'*/
414     replace FREQWALKINI = 1 if Wrkbyfoot_CLEAN == 1 /* 'Always'*/
415     gen FREQTOTAL = FREQCARINI + FREQPUBLICINI + FREQCYCLEINI + FREQWALKINI
416
417
418     gen DISTWORKMILES = .
419     replace DISTWORKMILES = 0 if  Wrkmiles_CLEAN <=0 & Wrkkms_CLEAN <=0
420     replace DISTWORKMILES = (Wrkkms_CLEAN*0.62) if (Wrkkms_CLEAN >0 & Wrkmiles_CLEAN <=0)
421     replace DISTWORKMILES = (Wrkmiles_CLEAN) if (Wrkmiles_CLEAN >0 & Wrkkms_CLEAN <=0)
422     replace DISTWORKMILES = ((Wrkmiles_CLEAN +0.62*Wrkkms_CLEAN)/2) if (Wrkkms_CLEAN > 0 & Wrkmiles_CLEAN > 0)
423
424     *Truncation of total distance ****set maximum miles to 100miles for anyone claiming more than that as a distance
425     replace DISTWORKMILES = 100 if (DISTWORKMILES > 100 & DISTWORKMILES  != .)
426     */
427
428     gen CARMILES = 0
429     replace CARMILES = DISTWORKMILES * FREQCARINI if FREQCARINI >= 0.25
430     gen PUBLICMILES = 0
431     replace PUBLICMILES = DISTWORKMILES * FREQPUBLICINI if FREQPUBLICINI  >= 0.25
432     gen CYCLEMILES = 0
433     replace CYCLEMILES = DISTWORKMILES * FREQCYCLEINI if FREQCYCLEINI >= 0.25
434     gen WALKMILES = 0
435     replace WALKMILES = DISTWORKMILES * FREQWALKINI if FREQWALKINI  >= 0.25
436
437     gen TOTALTRAVMILES_DER = CARMILES + PUBLICMILES + CYCLEMILES + WALKMILES
438
439     gen DISTFACTOR = DISTWORKMILES/TOTALTRAVMILES_DER
440
441     *Assigning distance to multi-mode commuters.
442     * 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
443     * and walking, we make the assumption that they drive most (90%) of the way. This may get further truncated in the next section.
444
445     replace CARMILES = (0.5*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI <0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
446     replace PUBLICMILES = (0.5*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI <0.25 & FREQWALKINI < 0.25& FREQTOTAL >= 1.25
447
448     replace CARMILES = (0.95*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQPUBLICINI <0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
449     replace CYCLEMILES = (0.05*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQPUBLICINI <0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
450
451     replace CARMILES = (0.99*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCYCLEINI <0.25 & FREQPUBLICINI < 0.25 & FREQTOTAL >= 1.25
452     replace WALKMILES = (0.01*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQWALKINI >= 0.25  & FREQCYCLEINI <0.25 & FREQPUBLICINI < 0.25 & FREQTOTAL >= 1.25
453
454     replace PUBLICMILES = (0.9*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQCARINI <0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
455     replace CYCLEMILES = (0.1*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQCARINI <0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
456
457     replace PUBLICMILES = (0.99*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCYCLEINI <0.25 & FREQCARINI < 0.25 & FREQTOTAL >= 1.25
458     replace WALKMILES = (0.01*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCYCLEINI <0.25 & FREQCARINI < 0.25 &  FREQTOTAL >= 1.25
459
460     replace CYCLEMILES = (0.95*DISTWORKMILES) if FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCARINI <0.25 & FREQPUBLICINI < 0.25 & FREQTOTAL >= 1.25
461     replace WALKMILES = (0.05*DISTWORKMILES) if FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCARINI <0.25 & FREQPUBLICINI < 0.25 &  FREQTOTAL >= 1.25
462
463     replace CARMILES = (0.475*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
464     replace PUBLICMILES = (0.475*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
465     replace CYCLEMILES = (0.05*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI < 0.25 & FREQTOTAL >= 1.25
466
467     replace CARMILES = (0.495*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCYCLEINI <0.25 &  FREQTOTAL >= 1.25
468     replace PUBLICMILES = (0.495*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCYCLEINI <0.25 &  FREQTOTAL >= 1.25
469     replace WALKMILES = (0.01*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCYCLEINI <0.25 & FREQTOTAL >= 1.25
470
471     replace CARMILES = (0.9*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQPUBLICINI < 0.25 & FREQTOTAL >= 1.25
472     replace CYCLEMILES = (0.09*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQPUBLICINI < 0.25 & FREQTOTAL >= 1.25
473     replace WALKMILES = (0.01*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQPUBLICINI < 0.25 & FREQTOTAL >= 1.25
474
475     replace PUBLICMILES = (0.9*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCARINI <0.25 & FREQTOTAL >= 1.25
476     replace CYCLEMILES = (0.09*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCARINI <0.25 & FREQTOTAL >= 1.25
```

```
477     replace WALKMILES = (0.01*DISTWORKMILES) if FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQCARINI <0.25 & FREQTOTAL >= 1.25
478
479     replace CARMILES = (0.45*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQTOTAL >= 1.25
480     replace PUBLICMILES = (0.45*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQTOTAL >= 1.25
481     replace CYCLEMILES = (0.09*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQTOTAL >= 1.25
482     replace WALKMILES = (0.01*DISTWORKMILES) if FREQCARINI >= 0.25 & FREQPUBLICINI >= 0.25 & FREQCYCLEINI >= 0.25 & FREQWALKINI >= 0.25 & FREQTOTAL >= 1.25
483
484     *Truncate Walking and Cycling
485     replace CYCLEMILES = 20 if CYCLEMILES > 20 & CYCLEMILES !=.
486     replace WALKMILES = 3 if WALKMILES > 3 & WALKMILES !=.
487
488
489     gen DURWALK = WALKMILES*2*(5/7)/3
490     gen DURCYCLE = CYCLEMILES*2*(5/7)/10
491     gen DURCAR = CARMILES*2*(5/7)/45
492     gen DURPUBLIC = PUBLICMILES*2*(5/7)/30
493
494     *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
495
496     ***************************
497     /* RECREATIONAL ACTIVITY */
498     /* JP- Takes frequencies reported in categories to frequencies per week */
499     ***************************
500     foreach var in swimComp_CLEAN swimLeis_CLEAN backPackMountainClimb_CLEAN walkPleasure_CLEAN cyclingRacingRough_CLEAN ///
501     cyclePleasure_CLEAN mowing_CLEAN waterLawn_CLEAN heavyGardening_CLEAN weedPrune_CLEAN dIY_CLEAN Household_CLEAN ///
502     aerobicsHigh_CLEAN aerobicsOther_CLEAN exerciseWeights_CLEAN conditionExercise_CLEAN floorExercise_CLEAN dancing_CLEAN ///
503     compRun_CLEAN jog_CLEAN bowling_CLEAN tennisBadminton_CLEAN squash_CLEAN tableTennis_CLEAN golf_CLEAN ///
504     footballRugbyHockey_CLEAN cricket_CLEAN rowing_CLEAN netVolleyBasketBall_CLEAN huntingShootingFish_CLEAN horseBased_CLEAN ///
505     snookerBillardsDarts_CLEAN musicalInstrumentSing_CLEAN iceSkating_CLEAN Skiing_CLEAN sailingWindsurfBoat_CLEAN ///
506     combatsSports_CLEAN ActiveComputerGames_CLEAN {
507
508         gen `var'_orig = `var' // this keeps a copy of the untranslated frequency variables so we can save them
509
510         replace `var' = 0     if `var' <= 1 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1 & MISSINGC == 2
511         replace `var' = 1/4   if `var' == 2 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1
512         replace `var' = 2.5/4 if `var' == 3 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1
513         replace `var' = 1     if `var' == 4 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1
514         replace `var' = 2.5   if `var' == 5 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1
515         replace `var' = 4.5   if `var' == 6 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1
516         replace `var' = 7     if `var' == 7 & (QVersion_CLEAN == 8 | QVersion_CLEAN == 9 | QVersion_CLEAN == 10 | QVersion_CLEAN == 11) & template==1
517
518         //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:
519         replace `var' = 0     if `var' <= 2 & QVersion_CLEAN == 9 & template==2 & MISSINGC == 2
520         replace `var' = 1/4   if `var' == 3 & QVersion_CLEAN == 9 & template==2
521         replace `var' = 2.5/4 if `var' == 4 & QVersion_CLEAN == 9 & template==2
522         replace `var' = 1     if `var' == 5 & QVersion_CLEAN == 9 & template==2
523         replace `var' = 2.5   if `var' == 6 & QVersion_CLEAN == 9 & template==2
524         replace `var' = 4.5   if `var' == 7 & QVersion_CLEAN == 9 & template==2
525         replace `var' = 7     if `var' == 8 & QVersion_CLEAN == 9 & template==2
526
527     }
528
529     ***************************
530     /* JP- assigns maximum duration of activities to allow for over reporting of the duration of an episode */
531     ***************************
532
533     *truncated high durations
534     //Household & ActiveComputerGames need a category!
535     foreach x in swimComp swimLeis compRun jog bowling tennisBadminton tableTennis horseBased snookerBillardsDarts musicalInstrumentSing iceSkating ActiveComputerGames {
536
537         replace `x'Hr_CLEAN = 4 if `x'Hr_CLEAN >4 & `x'Hr_CLEAN !=.
538         replace `x'Min_CLEAN = 0 if `x'Hr_CLEAN >=4 & `x'Hr_CLEAN !=.
539     }
540
541     foreach x in exerciseWeights squash {
542
543         replace `x'Hr_CLEAN = 2 if `x'Hr_CLEAN >2 & `x'Hr_CLEAN !=.
544         replace `x'Min_CLEAN = 0 if `x'Hr_CLEAN >=2 & `x'Hr_CLEAN !=.
```

```
}

foreach x in mowing waterLawn aerobicsHigh aerobicsOther conditionExercise floorExercise footballRugbyHockey netVolleyBasketBall 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 Household {

    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
foreach x in swimComp swimLeis backPackMountainClimb walkPleasure cyclingRacingRough cyclePleasure mowing waterLawn heavyGardening ///
weedPrune dIY Household aerobicsHigh aerobicsOther exerciseWeights conditionExercise floorExercise dancing compRun jog bowling ///
tennisBadminton squash tableTennis golf footballRugbyHockey cricket rowing netVolleyBasketBall huntingShootingFish horseBased ///
snookerBillardsDarts musicalInstrumentSing iceSkating Skiing sailingWindsurfBoat combatsSports ActiveComputerGames {

    su `x'_CLEAN if `x'_CLEAN > 0 & `x'_CLEAN !=., detail
    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))
    replace `x'_CLEAN = 0 if (`x'_CLEAN == . | `x'_CLEAN < 0 ) & MISSINGC == 2
}

*where no duration is reported (but frequency is) assign median duration from those participating in the activity
foreach x in swimComp swimLeis backPackMountainClimb walkPleasure cyclingRacingRough cyclePleasure mowing waterLawn heavyGardening ///
weedPrune dIY Household aerobicsHigh aerobicsOther exerciseWeights conditionExercise floorExercise dancing compRun jog bowling ///
tennisBadminton squash tableTennis golf footballRugbyHockey cricket rowing netVolleyBasketBall huntingShootingFish horseBased ///
snookerBillardsDarts musicalInstrumentSing iceSkating Skiing sailingWindsurfBoat combatsSports ActiveComputerGames {

    replace `x'Hr_CLEAN = 0 if `x'Hr_CLEAN < 0
    replace `x'Min_CLEAN = 0 if `x'Min_CLEAN < 0
    *generate total hrs of each activity
    gen TOT_`x'Hr = .
    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))
    su TOT_`x'Hr if TOT_`x'Hr > 0 & TOT_`x'Hr < 20, detail
    replace TOT_`x'Hr = r(p50) if (TOT_`x'Hr  == .) & (`x'_CLEAN > 0 & `x'_CLEAN < 8)
    replace TOT_`x'Hr = 0 if (TOT_`x'Hr == . & MISSINGC == 2)
}

* once clean generate the total duration (hours per day)
foreach x in swimComp swimLeis backPackMountainClimb walkPleasure cyclingRacingRough cyclePleasure mowing waterLawn heavyGardening ///
weedPrune dIY Household aerobicsHigh aerobicsOther exerciseWeights conditionExercise floorExercise dancing compRun jog bowling ///
tennisBadminton squash tableTennis golf footballRugbyHockey cricket rowing netVolleyBasketBall huntingShootingFish horseBased ///
snookerBillardsDarts musicalInstrumentSing iceSkating Skiing sailingWindsurfBoat combatsSports ActiveComputerGames {

    *generate total hrs of each activity per day
    gen TOTDUR_`x' = (TOT_`x'Hr * `x'_CLEAN)/7

}

* DNAC data harmonisation: Household, skiing and active computer games not asked at Yr9-11
* For comparison these are set to 0 in TOTDUR so no value is taken forward for processing, but raw values left in
foreach x in Household Skiing ActiveComputerGames {
    replace TOTDUR_`x' = 0 if TOTDUR_`x' !=.
}

**************************
/* calculates total reported leisure time activities per day */
**************************
egen DURATIONLEIS = rowtotal (TOTDUR_swimComp TOTDUR_swimLeis TOTDUR_backPackMountainClimb TOTDUR_walkPleasure ///
```

```
613       TOTDUR_cyclingRacingRough TOTDUR_cyclePleasure TOTDUR_mowing TOTDUR_waterLawn TOTDUR_heavyGardening ///
614       TOTDUR_weedPrune TOTDUR_dIY TOTDUR_Household TOTDUR_aerobicsHigh TOTDUR_aerobicsOther TOTDUR_exerciseWeights ///
615       TOTDUR_conditionExercise TOTDUR_floorExercise TOTDUR_dancing TOTDUR_compRun TOTDUR_jog TOTDUR_bowling ///
616       TOTDUR_tennisBadminton TOTDUR_squash TOTDUR_tableTennis TOTDUR_golf TOTDUR_footballRugbyHockey TOTDUR_cricket ///
617       TOTDUR_rowing TOTDUR_netVolleyBasketBall TOTDUR_huntingShootingFish TOTDUR_horseBased TOTDUR_snookerBillardsDarts ///
618       TOTDUR_musicalInstrumentSing TOTDUR_iceSkating TOTDUR_Skiing TOTDUR_sailingWindsurfBoat TOTDUR_combatsSports TOTDUR_ActiveComputerGames ) if MISSINGC == 2
619
620       ***************************
621       /* re-weights total reported activities per day if total is greater than 18hrs per day */
622       ***************************
623       gen SCRadj = DURSCREEN
624       gen TVadj = DURTV
625       gen COMPadj = DURCOMP
626       gen JOBadj = DURJOB
627       gen CARadj = DURCAR
628       gen PUBLICadj = DURPUBLIC
629       gen CYCLEadj = DURCYCLE
630       gen WALKadj = DURWALK
631       gen LEISadj = DURATIONLEIS
632       gen STAIRadj = DURSTAIRFLIGHT
633       egen DURATIONINI = rowtotal(SCRadj TVadj COMPadj JOBadj CARadj STAIRadj PUBLICadj CYCLEadj WALKadj LEISadj) if (MISSINGA == 2 | MISSINGCOMMUT == 2 | MISSINGJOB == 2 | MISSINGC == 2)
634
635       replace SCRadj = DURSCREEN*18/DURATIONINI if DURATIONINI > 18
636       replace TVadj = DURTV*18/DURATIONINI if DURATIONINI > 18
637       replace COMPadj = DURCOMP*18/DURATIONINI if DURATIONINI > 18
638       replace STAIRadj = DURSTAIRFLIGHT*18/DURATIONINI if DURATIONINI > 18
639       replace JOBadj= DURJOB*18/DURATIONINI if DURATIONINI > 18
640       replace CARadj = DURCAR*18/DURATIONINI if DURATIONINI > 18
641       replace PUBLICadj = DURPUBLIC*18/DURATIONINI if DURATIONINI > 18
642       replace CYCLEadj = DURCYCLE*18/DURATIONINI if DURATIONINI > 18
643       replace WALKadj = DURWALK*18/DURATIONINI if DURATIONINI > 18
644
645       foreach x in TOTDUR_swimComp TOTDUR_swimLeis TOTDUR_backPackMountainClimb TOTDUR_walkPleasure ///
646       TOTDUR_cyclingRacingRough TOTDUR_cyclePleasure TOTDUR_mowing TOTDUR_waterLawn TOTDUR_heavyGardening ///
647       TOTDUR_weedPrune TOTDUR_dIY TOTDUR_Household TOTDUR_aerobicsHigh TOTDUR_aerobicsOther TOTDUR_exerciseWeights ///
648       TOTDUR_conditionExercise TOTDUR_floorExercise TOTDUR_dancing TOTDUR_compRun TOTDUR_jog TOTDUR_bowling ///
649       TOTDUR_tennisBadminton TOTDUR_squash TOTDUR_tableTennis TOTDUR_golf TOTDUR_footballRugbyHockey TOTDUR_cricket ///
650       TOTDUR_rowing TOTDUR_netVolleyBasketBall TOTDUR_huntingShootingFish TOTDUR_horseBased TOTDUR_snookerBillardsDarts ///
651       TOTDUR_musicalInstrumentSing TOTDUR_iceSkating TOTDUR_Skiing TOTDUR_sailingWindsurfBoat TOTDUR_combatsSports TOTDUR_ActiveComputerGames {
652           gen `x'a = `x' /*variables postfixed with "a" stands for adjusted variable*/
653           replace `x'a = `x'*18/DURATIONINI if DURATIONINI > 18
654       }
655
656       ***************************
657       /* Calculating sleep time based on max reported hours of activities */
658       /* AH= Remaining time - Time not accounted for by RPAQ */
659       ***************************
660
661       gen UNACCOUNTED = .
662       gen SLEEP = .
663       replace SLEEP = 6 if DURATIONINI > 18
664       replace SLEEP = 24-DURATIONINI if DURATIONINI <= 18 & DURATIONINI > 16
665       replace SLEEP = 8 if DURATIONINI <= 16
666
667       replace UNACCOUNTED = 24 -(DURATIONINI+8) if DURATIONINI <= 16
668       replace UNACCOUNTED = 24-DURATIONINI - SLEEP if DURATIONINI <= 18 & DURATIONINI > 16
669       replace UNACCOUNTED = 0 if DURATIONINI > 18
670
671
672       *generate adjusted durations for each domain considering maximum value of 18 for total activities
673
674       *HOME
675       egen HOMEtime = rowtotal(SCRadj TVadj COMPadj STAIRadj TOTDUR_Householda TOTDUR_mowinga TOTDUR_waterLawna TOTDUR_heavyGardeninga ///
676       TOTDUR_weedPrunea TOTDUR_dIYa) if MISSINGA == 2
677
678       *WORK
679       gen WORKtime = JOBadj if MISSINGJOB == 2
680
```

```
*COMMUTING
egen COMMUTEtime = rowtotal(CARadj PUBLICadj CYCLEadj WALKadj) if MISSINGCOMMUT == 2

*LEISURE
egen LEIStime = rowtotal(TOTDUR_swimCompa TOTDUR_swimLeisa TOTDUR_backPackMountainClimba TOTDUR_walkPleasurea ///
TOTDUR_cyclingRacingRougha TOTDUR_cyclePleasurea TOTDUR_aerobicsHigha TOTDUR_aerobicsOthera TOTDUR_exerciseWeightsa ///
TOTDUR_conditionExercisea TOTDUR_floorExercisea TOTDUR_dancinga TOTDUR_compRuna TOTDUR_joga TOTDUR_bowlinga ///
TOTDUR_tennisBadmintona TOTDUR_squasha TOTDUR_tableTennisa TOTDUR_golfa TOTDUR_footballRugbyHockeya TOTDUR_cricketa ///
TOTDUR_rowinga TOTDUR_netVolleyBasketBalla TOTDUR_huntingShootingFisha TOTDUR_horseBaseda TOTDUR_snookerBillardsDartsa ///
TOTDUR_musicalInstrumentSinga TOTDUR_iceSkatinga TOTDUR_Skiinga TOTDUR_sailingWindsurfBoata TOTDUR_combatsSportsa TOTDUR_ActiveComputerGamesa ) if MISSINGC == 2

egen TOTALtime = rowtotal(HOMEtime WORKtime COMMUTEtime LEIStime SLEEP)
*TOTALtime always = 24 (minus AH)


************************************************************
/* Calculation of MET scores as per Ainsworth's PA Compendium */
************************************************************
/* Home section */
gen SCORESCREEN = SCRadj //LG - need to know a MET score if we are giving a score above 1 (we do not do that with TV/COMP anymore
gen SCORETV = TVadj
gen SCORECOMP = COMPadj //redefined to be a MET score of 1 (as active computer use has been removed).
*stairs is halfway between 8 for going up and 3 for going down
gen SCORESTAIRS = STAIRadj*5.5
/*Home Activites from Recreation Section*/
gen SCOREHOUSEHOLD = TOTDUR_Householda * 2.3 // new for v10: Light Cleaning
gen SCORELAWN = TOTDUR_mowinga *5.5
gen SCOREWATER = TOTDUR_waterLawna *1.5
gen SCOREDIG = TOTDUR_heavyGardeninga *6
gen SCOREWEED = TOTDUR_weedPrunea *4.5
gen SCOREDIY = TOTDUR_dIYa *4.5

egen SCOREHOME = rowtotal(SCORESCREEN SCORETV SCORECOMP SCORESTAIRS SCOREHOUSEHOLD SCORELAWN SCOREWATER SCOREDIG SCOREWEED SCOREDIY)

replace SCOREHOME = . if MISSINGA == 1

/* Work section */

*worktype assigned as 1 (median in Fenland dataset) where worktype is missing but time in work reported
*original:
    /*
local sed_met = 1.5
local stand_met = 2.3
local man_met = 3.5
local heavyman_met = 5.5
*/

*Based on Fenland analysis 2015 (see relevant references in header)

local sed_met = 1.54
local stand_met = 1.74
local man_met = 1.93
local heavyman_met = 2.20

    gen SCOREJOB = . if MISSINGJOB == 1
    replace SCOREJOB = 0 if JOBadj == 0
    replace SCOREJOB = `sed_met'*JOBadj if JOBadj > 0 & (Worktype_CLEAN == . | Worktype_CLEAN <0)
    replace SCOREJOB = `sed_met'*JOBadj if Worktype_CLEAN == 1
    replace SCOREJOB = `stand_met'*JOBadj if Worktype_CLEAN == 2
    replace SCOREJOB = `man_met'*JOBadj if Worktype_CLEAN == 3
    replace SCOREJOB = `heavyman_met'*JOBadj if Worktype_CLEAN == 4


/* Commuting section */
gen SCORECAR = 1.5*CARadj   /*Compendium says driving 2METs, riding 1MET*/
gen SCOREPUBLIC = PUBLICadj
gen SCORECYCLE = 6*CYCLEadj
gen SCOREWALK = 3.3*WALKadj
```

```
749       egen SCORECOMMUTE = rowtotal(SCORECAR SCOREPUBLIC SCORECYCLE SCOREWALK)
750       replace SCORECOMMUTE = . if MISSINGCOMMUT == 1
751
752       *Generate MET scores for LTPA variables
753       /* Recreation section */
754       gen SCORELAPSWI = TOTDUR_swimCompa *10
755       gen SCORELESSWI = TOTDUR_swimLeisa *6
756       gen SCOREBAKPAK = TOTDUR_backPackMountainClimba *7
757       gen SCOREWALKPLEASURE = TOTDUR_walkPleasurea *3.5
758       gen SCORECYCRAC = TOTDUR_cyclingRacingRougha *10
759       gen SCORECYCPLE = TOTDUR_cyclePleasurea *4
760       gen SCORESTEP = TOTDUR_aerobicsHigha *7
761       gen SCOREAERO = TOTDUR_aerobicsOthera *5
762       gen SCOREWGHT = TOTDUR_exerciseWeightsa *3
763       gen SCOREEXER = TOTDUR_conditionExercisea *5.5
764       gen SCOREFLOOR = TOTDUR_floorExercisea *4
765       gen SCOREDANCE = TOTDUR_dancinga *4.5
766       gen SCORECOMRUN = TOTDUR_compRuna *12.5
767       gen SCOREJOG = TOTDUR_joga *7
768       gen SCOREBOWL = TOTDUR_bowlinga *3
769       gen SCORETENBAD = TOTDUR_tennisBadmintona *6
770       gen SCORESQUASH = TOTDUR_squasha *12
771       gen SCORETABTEN = TOTDUR_tableTennisa *4
772       gen SCOREGOLF = TOTDUR_golfa *4.5
773       gen SCOREFOOT = TOTDUR_footballRugbyHockeya *8
774       gen SCORECRICK = TOTDUR_cricketa *5
775       gen SCOREROW = TOTDUR_rowinga *7
776       gen SCORENET = TOTDUR_netVolleyBasketBalla *5.5
777       gen SCOREFISH = TOTDUR_huntingShootingFisha *3
778       gen SCOREHORSE = TOTDUR_horseBaseda *4
779       gen SCORESNOOK = TOTDUR_snookerBillardsDartsa *2.5
780       gen SCOREMUSIC = TOTDUR_musicalInstrumentSinga *2.7
781       gen SCORESKATE = TOTDUR_iceSkatinga *7
782       gen SCORESKI = TOTDUR_Skiinga * 6 // new for v10
783       gen SCORESAIL = TOTDUR_sailingWindsurfBoata *3
784       gen SCOREBOX = TOTDUR_combatsSportsa*10
785       gen SCOREACTCOMP = TOTDUR_ActiveComputerGamesa*2.3 // new for v10: Activity promoting video games light effort
786
787       egen SCORELEIS = rowtotal(SCORELAPSWI SCORELESSWI SCOREBAKPAK SCOREWALKPLEASURE SCORECYCRAC SCORECYCPLE  ///
788       SCORESTEP SCOREAERO SCOREWGHT SCOREEXER SCOREFLOOR SCOREDANCE SCORECOMRUN SCOREJOG ///
789       SCOREBOWL SCORETENBAD SCORESQUASH SCORETABTEN SCOREGOLF SCOREFOOT SCORECRICK SCOREROW SCORENET SCOREFISH ///
790       SCOREHORSE SCORESNOOK SCOREMUSIC SCORESKATE SCORESKI SCORESAIL SCOREBOX SCOREACTCOMP)
791
792       replace SCORELEIS = . if MISSINGC == 1
793
794       *Score Unaccounted time according to getting about mode (assumption being that this is a marker for energy cost of activities not captured)
795       gen SCORE_UNACCOUNTED = UNACCOUNTED * 1
796       replace SCORE_UNACCOUNTED = UNACCOUNTED * 1.3 if Gettingabout_CLEAN ==2 | Gettingabout_CLEAN ==4
797
798       /* Total score */
799
800       egen TOTMETHRS = rowtotal(SCOREHOME SCOREJOB SCORECOMMUTE SCORELEIS) if MISSING == 2 /*awake-time only*/
801       egen TOTMETHRS_w_UNACCtime = rowtotal(SCOREHOME SCOREJOB SCORECOMMUTE SCORELEIS SCORE_UNACCOUNTED) if MISSING == 2 /*awake-time only*/
802
803       egen TOTtime = rowtotal(HOMEtime WORKtime COMMUTEtime LEIStime)
804
805       gen ACTMETS = TOTMETHRS - TOTtime*1
806       gen ACTMETS_w_UNACCtime = TOTMETHRS_w_UNACCtime - (24-SLEEP)*1
807       *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
808
809       gen HOME_METS = SCOREHOME
810       gen WORK_METS = SCOREJOB
811       gen LEIS_METS = SCORELEIS
812       gen COMMUTE_METS = SCORECOMMUTE
813
814       gen HOME_ACTMETS = SCOREHOME - HOMEtime
815       gen WORK_ACTMETS = SCOREJOB - WORKtime
```

```
gen LEIS_ACTMETS = SCORELEIS - LEIStime
gen COMMUTE_ACTMETS = SCORECOMMUTE - COMMUTEtime

*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.
gen PAEE = ACTMETS * 3.5 * 20.35 * 60 / 1000
gen HOME_PAEE = HOME_ACTMETS * 3.5 * 20.35 * 60 / 1000
gen WORK_PAEE = WORK_ACTMETS * 3.5 * 20.35 * 60 / 1000
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(SCORESCREEN SCORETV SCORECOMP SCORECAR SCOREPUBLIC)
egen SED_INTENSITY2 = rowtotal(SCORESCREEN 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 SCOREWALKPLEASURE SCORECYCPLE ///
                                    SCORELAWN SCOREDIG SCOREWEED SCOREDIY SCOREAERO SCOREWGHT SCOREEXER SCOREFLOOR SCOREDANCE SCOREBOWL ///
                                    SCORETENBAD SCORETABTEN SCOREGOLF SCORECRICK SCORENET SCOREFISH SCOREHORSE SCORESAIL)
egen MODERATE_INTENSITY2 = rowtotal(SCORESTAIRS SCOREWALK SCORECYCLE SCORELESSWI SCOREWALKPLEASURE SCORECYCPLE ///
                                    SCORELAWN SCOREDIG SCOREWEED SCOREDIY SCOREAERO SCOREWGHT SCOREEXER SCOREFLOOR SCOREDANCE SCOREBOWL ///
                                    SCORETENBAD SCORETABTEN SCOREGOLF SCORECRICK SCORENET 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 SCOREROW SCORESKATE SCOREBOX SCORESKI)
egen VIGOROUS_INTENSITY2 = rowtotal(SCORELAPSWI SCOREBAKPAK SCORECYCRAC SCORESTEP SCORECOMRUN SCOREJOG SCORESQUASH SCOREFOOT 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(SCRadj TVadj COMPadj CARadj PUBLICadj)
egen SEDtime2 = rowtotal(SCRadj 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_walkPleasurea TOTDUR_cyclePleasurea TOTDUR_mowinga ///
TOTDUR_heavyGardeninga TOTDUR_weedPrunea TOTDUR_dIYa TOTDUR_aerobicsOthera TOTDUR_exerciseWeightsa ///
TOTDUR_conditionExercisea TOTDUR_floorExercisea TOTDUR_dancinga TOTDUR_bowlinga TOTDUR_tennisBadmintona TOTDUR_tableTennisa TOTDUR_golfa ///
TOTDUR_cricketa TOTDUR_netVolleyBasketBalla TOTDUR_huntingShootingFisha TOTDUR_horseBaseda TOTDUR_sailingWindsurfBoata)
egen MODERATEtime2 = rowtotal(STAIRadj WALKadj CYCLEadj TOTDUR_swimLeisa 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_tennisBadmintona TOTDUR_tableTennisa TOTDUR_golfa ///
TOTDUR_cricketa TOTDUR_netVolleyBasketBalla TOTDUR_huntingShootingFisha TOTDUR_horseBaseda TOTDUR_sailingWindsurfBoata JOBadj)
replace MODERATEtime = MODERATEtime2 if Worktype_CLEAN == 3
drop MODERATEtime2


*Time spent in VPA: >=6 METs
```

```
884       egen VIGOROUStime = rowtotal(TOTDUR_swimCompa TOTDUR_backPackMountainClimba TOTDUR_cyclingRacingRougha ///
885       TOTDUR_aerobicsHigha TOTDUR_compRuna TOTDUR_joga TOTDUR_squasha TOTDUR_footballRugbyHockeya ///
886       TOTDUR_rowinga TOTDUR_iceSkatinga TOTDUR_combatsSportsa TOTDUR_Skiinga)
887       egen VIGOROUStime2 = rowtotal(TOTDUR_swimCompa TOTDUR_backPackMountainClimba TOTDUR_cyclingRacingRougha ///
888       TOTDUR_aerobicsHigha TOTDUR_compRuna TOTDUR_joga TOTDUR_squasha TOTDUR_footballRugbyHockeya ///
889       TOTDUR_rowinga TOTDUR_iceSkatinga TOTDUR_combatsSportsa TOTDUR_Skiinga JOBadj)
890       replace VIGOROUStime = VIGOROUStime2 if Worktype_CLEAN == 4
891       drop VIGOROUStime2
892
893       ********************************
894       *** LABELLING OF KEY VARIABLES ***
895       ********************************
896       label var TOTMETHRS "Total reported duration (hours) of activity times intensity (MET) [METhrs/d]"
897       label var TOTMETHRS_w_UNACCtime  "Total reported plus unaccounted duration hours) times intensity (MET) [METhrs/d]"
898       label var TOTtime "Total reported duration (hours) of activity [hrs/d]"
899       label var TOTALtime "Total reported duration (hours) of activity + assumed sleep [hrs/d]"
900       label var ACTMETS "Total activity energy expenditure discounting resting [net METhrs/d]"
901       label var ACTMETS_w_UNACCtime "Activity EE incl AEE for unaccounted time for active getting about [net METhrs/d]"
902       label var PAEE "Physical activity energy expenditure [kJ/kg/d]"
903
904       label var HOME_METS "Home domain energy expenditure [METhrs/d]"
905       label var WORK_METS "Work domain energy expenditure [METhrs/d]"
906       label var LEIS_METS "Leisure domain energy expenditure [METhrs/d]"
907       label var COMMUTE_METS "Commute domain energy expenditure [METhrs/d]"
908       label var HOME_ACTMETS "Home domain activity energy expenditure [net METhrs/d]"
909       label var WORK_ACTMETS "Work domain activity energy expenditure [net METhrs/d]"
910       label var LEIS_ACTMETS "Leisure domain activity energy expenditure [net METhrs/d]"
911       label var COMMUTE_ACTMETS "Commute domain activity energy expenditure [net METhrs/d]"
912       label var HOME_PAEE "Home domain activity energy expenditure [kJ/kg/d]"
913       label var WORK_PAEE "Work domain activity energy expenditure [kJ/kg/d]"
914       label var LEIS_PAEE "Leisure domain activity energy expenditure [kJ/kg/d]"
915       label var COMMUTE_PAEE "Commute domain activity energy expenditure [kJ/kg/d]"
916
917       label var SED_INTENSITY "Sedentary behavior energy expenditure [METhrs/d]"
918       label var LIGHT_INTENSITY "Light intensity energy expenditure [METhrs/d]"
919       label var MODERATE_INTENSITY "Moderate intensity energy expenditure [METhrs/d]"
920       label var VIGOROUS_INTENSITY "Vigorous intensity energy expenditure [METhrs/d]"
921       label var SEDtime "Time spent sedentary, excluding sleep [hrs/d]"
922       label var LIGHTtime "Time spent at light intensity activity [hrs/d]"
923       label var MODERATEtime "Time spent at moderate intensity activity [hrs/d]"
924       label var VIGOROUStime "Time spent at vigorous intensity activity [hrs/d]"
925
926       order ISerial template
927
928       nois di in red "$OUTPUT_FOLDER/`YEAR'_$OUTPUT_SUFFIX"
929       save "$OUTPUT_FOLDER/`YEAR'_$OUTPUT_SUFFIX.dta", replace
930       outsheet using "$OUTPUT_FOLDER/`YEAR'_$OUTPUT_SUFFIX.csv", comma replace
931
932       *This is now the most up to date version of RPAQ data with METs generated that is to be used for analyses.
933
934       set more off
935       di "Listing extreme PAEE values"
936       list ISerial PAEE WORK_PAEE Worktype_CLEAN WORKtime LEIStime LIGHTtime MODERATEtime VIGOROUStime if WORK_PAEE> 120 & WORK_PAEE!=.
937       list ISerial PAEE LEIS_PAEE LEIStime LIGHTtime MODERATEtime VIGOROUStime if LEIS_PAEE> 120 & LEIS_PAEE!=.
938
939       restore
940   }
941
942   timer off 1
943   timer list 1
944
```