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Covance Study ID      : COV-000000106343
Program Name          : d_3adqspa.sas
Purpose               : Program to create ADQSPA dataset
Author               : cvn_pshe
Date of Creation      : 10APR2015

Input Data            : STDLIB.ADQSSYM SDTM.QS ADAM.ADSL;
Output Data           : AADAM.ADQSSYM;
Macros Called         : m_printto,%m_totper, m_perall, m_logchk

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Modification History
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Modified by          :
Modification Date    :
Modification Description:
-----*/

options notes nosource;
proc datasets lib=work nolist memtype=data kill; quit;
* macro to save output and log to appropriate areas ;
%m_printto;
options notes source source2 nofullstimer validvarname=upcase missing=' ' mprint symbolgen;
ods _all_ close;
ods listing;

*=====;
* START OF PROGRAM CODE                               ;
*=====;
libname sdtm "/cvn/projects/prj/data/000000106343/datasets/sdtm/sdtmx";

*****;
* bring in ADSL ;
*****;
data adsl;
    set adam.adsl;
    keep studyid usubjid subjid: siteid age sex: race height weightbtl bmi ucpdgr1 ucpdgr1n /*nicogr1 nicogr1n
        targr1 targr1n*/ enrfl scrffl complfl SAFBFL SAFAFL fasfl pprot1fl pprot2fl pprot3fl pprot4fl randfl trt: dthfl enfl exfl
        fupfl exnotrfl trtsdtm trtsdmf trtsdt trtsday trtedtm trtetmf trtedt trteday trt01p trt01pn trt01a trt01a;
run;

*****;
* bring in QS ;
*****;
data qs;
    set sdtm.qs(where = (qscat = 'COUGH ASSESSMENT QUESTIONNAIRE'));
    format paramcd $8. parcat1 $200. avisit $40. paramn parcat1n asper apuper 8. aval AVISITN best. param asperc $40. apuper $8.
    avalc $50. adt date9. adtm datetime13. atm time5.;

* parameter variables ;
parcat1 = propcase(qscat);
parcat1n = 1;
if qstestcd='QSALL' then delete;

paramcd = qstestcd;
param = propcase(qstest,'. ');

if qstestcd='QSALL' then delete;

if qstestcd = 'COUGH24' then paramn = 1;
else if qstestcd = 'COUIMP' then paramn = 2;
else if qstestcd = 'COUINT' then paramn = 3;
else if qstestcd = 'COURFEQ' then paramn = 4;
else if qstestcd = 'COUSPUT' then paramn = 5;
else if qstestcd = 'COUOTH' then paramn = 6;
/* else if qstestcd='QSALL' then paramn=99;*/
else put 'USER WARN' 'ING: check parameter names as paramn not allocated:' qstestcd = ;

* analysis variables ;
if qstestcd = 'COUINT' then do;
    if qsstresc='VERY MILD' then aval=1;
    if qsstresc='MILD' then aval=2;
    if qsstresc='MODERATE' then aval=3;
    if qsstresc='SEVERE' then aval=4;
    if qsstresc='VERY SEVERE' then aval=5;
end;
else if qstestcd = 'COURFEQ' then do;
    if qsstresc='RARELY' then aval=1;

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    if qsstresc='SOMETIMES' then aval=2;
    if qsstresc='FAIRLY OFTEN' then aval=3;
    if qsstresc='OFTEN' then aval=4;
    if qsstresc='ALMOST ALWAYS' then aval=5;
end;
else if qstestcd = 'COUSPUT' then do;
    if qsstresc='NO SPUTUM' then aval=0;
    if qsstresc='A MODERATE AMOUNT OF SPUTUM' then aval=1;
    if qsstresc='A LARGE AMOUNT OF SPUTUM' then aval=2;
    if qsstresc='A VERY LARGE AMOUNT OF SPUTUM' then aval=3;
end;
else aval = qsstresn;

avalc = propcase(qsstresc, '.');

* visit details ;
avisit = propcase(visit);
avisitn = visitnum;

* dates;
if length(qsdtc) gt 10 then do;
    ADTM=DHMS(INPUT(SCAN(QSDTC,1,'T'),YYMMDD10.),HOUR(INPUT(SCAN(QSDTC,2,'T'),TIME5.)),MINUTE(INPUT(SCAN(QSDTC,2,'T'),TIME5.)),0); /
* 15) KB 01Jul2014 */
    adt = datepart(adtm);
    atm = timepart(adtm);
end;
else if length(qsdtc) = 10 then adt = input(qsdtc, yymmdd10.);

if avisitn < 101 then asper=1;
else if 101<=avisitn<=106 then asper=2;
else if 106<avisitn<=191 then asper=3;
else if avisitn>191 then asper=4;

if asper=1 then asperc= 'Pre-Randomization Period';
else if asper=2 then asperc='Confinement Period';
else if asper=3 then asperc='Ambulatory Period';
else if asper=4 then asperc='Safety Follow-up Period';

if 101<=avisitn<=106 then apuper=1;
else if 106<avisitn<=131 then apuper=2;
else if 131<avisitn<=161 then apuper=3;
else if 161<avisitn<=191 then apuper=4;

if apuper=1 then apuperc= 'Period 1';
else if apuper=2 then apuperc='Period 2';
else if apuper=3 then apuperc='Period 3';
else if apuper=4 then apuperc='Period 4';

keep usubjid qsseq param: parcat: aval: avisit: adt: atm qsstat qsreasnd qsdtc qsdyc epoch asper: apuper;;
run;

proc sort data=qs;
    by usubjid;
run;

*****;
* Combine ADSL and QS data *;
*****;
* treatment period;
%am_totper;

data qssym (drop=trt01p trt01pn trt01a trt01an);
    merge adsl qs(in=qs);
    by usubjid;
    if qs;
    format aperiod trtan trtpn aday 8. trta trtp $40. aperiodc $10.;
    if nmiss(adt, trtsdt)=0 then aday = adt - trtsdt + 1;
    * allocate tretament and period;
    %m_perall(dvar1 = adtm, dvar2 = adt);
    if not missing(aperiod) then do;
        aperiodc = 'Period ' || put(aperiod,1.);
    end;

    if TRTPN=97 | TRTPN=98 then do; APUPER=.; APUPERC = ''; end;
run;

proc sort data=qssym;
    by usubjid paramn avisitn aval;

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run;

* anlxxfl ;
data qssym;
  set qssym;
  by usubjid paramn avisitn aval ;
  format anl01f1 anl02f1 anl03f1 $2.;

  if (SAFBFL='Y' or SAFAFL='Y') then do;
    if first.avisitn then anl01f1='Y';
    if PARAMCD in ('COUINT','COURFEQ','COUSPUT') then do;
      if avisitn=100 and last.aval then anl02f1='Y';
      else if avisitn >100 and last.aval then anl03f1='Y';
    end;
  end;
end;
run;

* wiondow variables;
* wiondow variables;
data doses;
  set adam.adex;
  where astday in (0, 1, 2, 3, 4, 5, 6, 31, 61, 91);
  format astm time5.;
  if trta='SA' then do;
    astm ='10:00'T; * NO PRODUCT SMOKED SO 10AM AT LATEST ;
  end;
  else do;
    if astday = 31 or astday= 61 then astm ='10:00'T; *per SAP *;
    else if astdtm ne . then astm=timepart(astdtm);
  end;
  if missing(astm) then delete;
  if astm le '10:00'T;
  keep usubjid astday astm astdt;
run;

proc sort data=doses;
  by usubjid astday astm;
run;

/* proc freq data=adam.adex;*/
/*/* where qscat in ('MODIFIED CIGARETTE EVALUATION QUESTIONNAIRE');*/*/
/* tables paramcd*trta /list nocum nocol norow nopercnt missing;*/
/* run; */
/**/
/* proc freq data=adam.adex;*/
/*/* where qscat in ('MODIFIED CIGARETTE EVALUATION QUESTIONNAIRE');*/*/
/* tables srcdom*trta /list nocum nocol norow nopercnt missing;*/
/* run; */;

data doses1 (drop=astm astdt);
  format awrange $50. awhi awlo time5.;
  set doses;
  by usubjid astday astm;
  if last.astday;
  awlo=.;
  awhi=astm;
  awrange=strip("<")||strip(put(awhi, time5.));
  rename astday = aday;
run;

proc sort data=doses1;
  by usubjid aday;
run;

proc sort data=qssym;
  by usubjid aday;
run;

data qssym2;
  format devwc $10.;
  merge qssym (in=a) doses1;
  by usubjid aday;
  if a;
  IF QSSTAT NE 'NOT DONE' and nmiss(atm, awlo, awhi)=0 THEN DO;
    IF ATM<AWLO THEN DO;
      DEVN=FLOOR((ATM-AWLO)/60);
      DEVWC=COMPRESS(PUT(FLOOR((ATM-AWLO)/60),BEST.));
    END;
  END;

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        ELSE IF ATM>AWHI THEN DO;
            DEVN=CEIL ( (ATM-AWHI) /60);
            DEVWC=COMPRESS(PUT (CEIL ( (ATM-AWHI) /60),BEST.));
        END;
    END;

    IF NOT MISSING(DEVWC) THEN DO;
        IF INDEX(DEVWC, '-' )=0 THEN DEVWC=CATS(CATS('+',DEVWC), ' min');
        ELSE IF INDEX(DEVWC, '-' ) THEN DEVWC=CATS(DEVWC, ' min');
    END;

run;

*****;
* create output dataset ;
*****;

options replace;

proc sort data = qssym2 out=adqssym;
/* by usubjid avisitn parcat1n parcat2n;*/
    BY USUBJID AVISITN PARAMCD;
run;

%m_attrib_adam (dset=ADQSSYM);

data adam.adqssym (label= 'Symptoms Questionnaire Analysis Dataset');
    set adqssym;
run;

options noreplace;

proc printto; run;

%m_logchk;

*=====;
* END OF PROGRAM CODE ;
*=====;

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