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Covance Study ID : COV-000000106343

Program Name : d_3adqssym.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

Modification History

Modified by :

Modification Date :

Modification Description:

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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 adam "&base2/datasets/adam/cleaned_adam";

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 weightbl bmi ucpdgr1 ucpdgr1n enrfl
scrffl complfl SAFBFL SAFAFL fasfl pprot1fl pprot2fl pprot3fl pprot4fl randfl trt: dthfl enfl exfl

    fupfl exnotrfl trtsdtm trtstmf 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. apuperc $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 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;

    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.)),MINUT  
E(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,yyymmdd10.);
```

```
    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 qsdte qsdyc epoch asper:  
apuper;;
```

```
run;
```

```
proc sort data=qs;
```

```
by usubjid;
```

```
run;
```

```
*****,
```

```
* Combine ADSL and QS data *;
```

```
*****,
```

```
* treatment period;
```

```
%m_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(adl, trtsdt)=0 then aday = adl - trtsdt + 1;
```

```
* allocate treatment and period;
```

```
%m_perall(dvar1 = adtm, dvar2 = adl);
```

```
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;
```

```
run;
```

```
* anlxxfl ;
```

```
data qssym;
```

```
    set qssym;
```

```
    by usubjid paramn avisitn aval ;
```

```
    format anl01fl anl02fl anl03fl $2.;
```

```
        if (SAFBFL='Y' or SAFAFL='Y') then do;
```

```
            if first.avisitn then anl01fl='Y';
```

```
                if PARAMCD in ('COUINT','COURFEQ','COUSPUT') then do;
```

```
                    if avisitn=100 and last.aval then anl02fl='Y';
```

```
                    else if avisitn >100 and last.aval then anl03fl='Y';
```

```
                end;
```

```
            end;
```

```
run;
```

```
* 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;


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;

  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 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          ;
```

```
*=====;
```