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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 ;
%_mprintto;
%put NOTE:
=====;
%put NOTE: Covance Study Number : 000000106326;
%put NOTE: Client Protocol ID : ZRHM-PK-05-JP;
%put NOTE: Program Name : d_2ADQSND.sas;
%put NOTE: Purpose : create ADQSND dataset;
%put NOTE: ;
%put NOTE: Input Data : STDLIB.ADQSND SDTM.QS ADAM.ADSL;
%put NOTE: Output : ADAM.ADQSND;
%put NOTE: Macros Called : _MPRINTTO _SCRAMBLE;
%put NOTE: ;
%put NOTE: Programmed by : cvn_kbooth;
%put NOTE: Creation Date : 2014-04-13;
%put NOTE: SAS Version : 9.3;
%put NOTE: ;
%put NOTE: == Latest Run
=====;
%put NOTE: Run by : &sysuserid;
%put NOTE: Date/Time :
%sysfunc(putn(%sysfunc(date()),e8601da.))T%sysfunc(putn(%sysfunc(time()),
e86011z.));
%put NOTE: ;
%put NOTE: == Modification History
=====;
%put NOTE: Date Initials No. Reason;
%put NOTE: 22Apr2014 KB 1) Added formats to ADAY and AVISITN;
%put NOTE: 22Apr2014 KB 2) Amended ANL01FL to only populate for
FTNDSC;
%put NOTE: 22Apr2014 KB 3) Amended warning in log;
%put NOTE: 05Aug2014 KB 4) Dropped ABLFL;
%put NOTE: 05Aug2014 KB 5) Added EXNOTRFL & NICOGR2 variables;
%put NOTE: 05Aug2014 KB 6) Amended ADAY, AVISITN & AVALC
format;
%put NOTE:
=====;
options notes source source2 nofullstimer validvarname=upcase missing='
';
ods _all_ close;
ods listing;

*=====;
* START OF PROGRAM CODE ;
*=====;
*****;
* bring in ADSL ;
*****;

data adsl;
set adam.adsl;

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        keep studyid usubjid subjid: siteid age sex: race height weightb1
bmi ucpdgr1 ucpdgrln nicogr1 nicogrln NICOGR2 NICOGR2N targr1 targrln /*
5) KB 05Aug2014 */
        enrfl scrfl complfl saffl pprotfl randfl trt: trt01: tr01:
dthfl enfl exfl fupfl analgr1 analgrln EXNOTRFL; /* 5) KB 05Aug2014 */
run;

*****;
* bring in QS ;
*****;

data qs;
    set sdtm.qs(where = (qscat in ('FAGERSTROM TEST FOR NICOTINE
DEPENDENCE QUESTIONNAIRE')));
    format paramcd $8. parcat1 $200. avisit $40. paramn parcatln 8.
aval best. param $200. avalc /*$100.*/$50. adt date9. /* 6) KB 05Aug2014
*/
    adtm datetime13. atm time5. ablfl $2. AVISITN /*BEST.*/8.; /* 1) KB
22Apr2014 */ /* 6) KB 05Aug2014 */
    * parameter variables ;
    parcat1 = propcase(qscat);
    if qscat = 'FAGERSTROM TEST FOR NICOTINE DEPENDENCE QUESTIONNAIRE'
then parcatln = 1;

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

    paramn = input(substr(qstestcd,5),best.);
    if parcatln = 1 then paramn = paramn + 17;

    * analysis variables ;
    if qscat = 'FAGERSTROM TEST FOR NICOTINE DEPENDENCE QUESTIONNAIRE'
then do;
        if qstestcd = 'FTND01' then do;
            if qsstresc = 'WITHIN 5 MINUTES' then aval = 3;
            else if qsstresc = '6-30 MINUTES' then aval = 2;
            else if qsstresc = '31-60 MINUTES' then aval = 1;
            else if qsstresc = 'AFTER 60 MINUTES' then aval = 0;
            else put 'USER WARN' 'ING: check response as not in
codelist: ' usubjid = qstestcd = qsstresc = ;
        end;
        else if qstestcd in ('FTND02' 'FTND05' 'FTND06') then do;
            if qsstresc = 'YES' then aval = 1;
            else if qsstresc = 'NO' then aval = 0;
            else put 'USER WARN' 'ING: check response as not in
codelist: ' usubjid = qstestcd = qsstresc = ;
        end;
        else if qstestcd = 'FTND03' then do;
            if qsstresc = 'THE FIRST IN THE MORNING' then aval = 1;
            else if qsstresc = 'ANY OTHER' then aval = 0;
            else put 'USER WARN' 'ING: check response as not in
codelist: ' usubjid = qstestcd = qsstresc = ;
        end;
        else if qstestcd = 'FTND04' then do;

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        if qsstresc = '10 OR LESS' then aval = 0;
        else if qsstresc = '11-20' then aval = 1;
        else if qsstresc = '21-30' then aval = 2;
        else if qsstresc = '31 OR MORE' then aval = 3;
        else put 'USER WARN' 'ING: check response as not in
codelist: ' usubjid = qstestcd = qsstresc = ;
        end;
    end;

    avalc = propcase(qsstresc, '.');

    * baseline flag;
    ablfl = qsbflfl;

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

    * dates;
    if length(qsdtc) gt 10 then do;
        adtm = input(qsdtc, e8601dt.);
        adt = datepart(adtm);
        atm = timepart(adtm);
    end;
    else if length(qsdtc) = 10 then adt = input(qsdtc, yymmdd10.);

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

* derive scores ;
proc sort data = qs;
    by usubjid parcatln avisitn adtm adt atm ablfl;
run;

proc summary data = qs noprint;
    var aval;
    by usubjid parcatln parcatl avisitn avisit adtm adt atm ablfl;
    output      out = mfactor(drop = _)      sum = sum n = n nmiss =
nmiss;
run;

* derive overall score;
proc sort data = qs;
    by usubjid parcatln avisitn adtm adt atm ablfl;
run;

data mean(drop = n nmiss);
    set mfactor;
    where parcatln=1;
    format paramcd $8. paramn 8. param $100. paramtyp dtype $10. aval
best. avalc avalcatl $50.;
    paramtyp = 'DERIVED';
    dtype = 'SUM';

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paramcd = 'FTNDSC';
paramn = 25;
param = 'Fagerstrom Score';
  if nmiss = 0 then do;
    aval = sum;
    avalc = strip(put(aval,best.));

    if 0 le aval le 3 then avalcat1 = 'Mild';
    else if 4 le aval le 6 then avalcat1 = 'Moderate';
    else if 7 le aval le 10 then avalcat1 = 'Severe';
    else put 'USER WARN' 'ING: check score as outside required
values: ' usubjid = aval = ;
    end;
  else do;
    aval = .;
    avalc= ' ';
    avalcat1 = ' ';
  end;
run;

* set together ;
data qs2;
  set qs mean;
run;

proc sort data=qs2;
  by usubjid paramn avisitn;
run;

data qs3;
  set qs2;
  by usubjid paramn avisitn;
  format anl01fl $2.;

  * determine if any unscheduled;
  if index(upcase(avisit),'UNSCHEDULED') or paramcd = 'QSALL' then
anl01fl = ' ';
  else if last.avisitn and first.avisitn = 0 then anl01fl = ' ';
  ELSE IF PARAMCD NE 'FTNDSC' THEN ANL01FL=''; /* 2) KB 22Apr2014 */
  else anl01fl = 'Y';
  if anl01fl = ' ' then put 'Check reason for exclusion from
analysis: ' usubjid = param = avisit = ;
run;

*****;
* Combine ADL and QS data *;
*****;
data slqsnd(drop = sum);
  merge adsl qs3(in = a);
  FORMAT ADAY /*BEST.*/8.; /* 1) KB 22Apr2014 */ /* 6) KB 05Aug2014 */
  by usubjid;
  if a; * only include subjects with data ;
  aday = adt - trtsdt + 1;

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        if paramcd in ('FTNDSC') then do;
            qsdtc='';
            qsdyn=.;
            epoch='';
        end;
run;

proc sort data = slqsnd;
    by subjidn aday paramn;
run;

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

options replace;

data adqsnd;
    set stdlib.adqsnd slqsnd;

    drop tr01: /*tr02:*/ trt01: trt02: ABLFL; /* 3) KB 22Apr2014 */ /*
4) KB 05Aug2014 */
run;

proc sort data = adqsnd out = adam.adqsnd(label = 'Nicotine Dependence
Analysis Dataset');
    by usubjid avisitn parcat1 paramcd;
run;

options noreplace;

%_scramble(set=adqsnd, id=usubjid subjid subjidn age sex sexc sexn race
dthfl height weightbl bmi ucpdgr1 ucpdgrln nicogr1
            nicogrln targr1 targrln analgr1 analgrln, dates=trtsdtm
trtsdt trtsday trtedtm trtedt trteday,
            nullc=trtseqp trtsega trtstmf, nulln=trtseqpn trtseqan,
nullcc=3, nullnc=2);

proc printto; run;
*=====;
* END OF PROGRAM CODE ;
*=====;

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