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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 : 000000106324;
%put NOTE: Client Protocol ID : ZRHR-REXC-03-EU;
%put NOTE: Program Name : d_2ADDE.sas;
%put NOTE: Purpose : create ADDE dataset;
%put NOTE: ;
%put NOTE: Input Data : STDLIB.ADDE SDTM.DE ADAM.ADSL
SDTM.SUPPDE;
%put NOTE: Output : ADAM.ADDE;
%put NOTE: Macros Called : _MPRINTTO;
%put NOTE: ;
%put NOTE: Programmed by : cvn_smulholl;
%put NOTE: Creation Date : 2013-09-25;
%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: 02Dec2013 SM 1) Removed VISITx variables as
duplicate of AVISITx and DTESTDT;
%put NOTE: 29Apr2014 KB 2) Added DEDECOD to keep;
%put NOTE: 29Apr2014 KB 3) Made AVISIT propcase;
%put NOTE: 29Apr2014 KB 4) Amended DESEVN to match specs;
%put NOTE: 29Apr2014 KB 5) Amended NDSN;
%put NOTE: 29Apr2014 KB 6) Amended sorting by key variables;
%put NOTE: 14May2014 KB 7) Amended sorting by key variables;
%put NOTE: 14May2014 KB 8) Removed formats from AEREL and NDSN;
%put NOTE: 14May2014 KB 9) Added EPOCH to code;
%put NOTE: 14May2014 KB 10) Amended sorting by key variables;
%put NOTE: 14May2014 KB 11) Amended APERIOD and APERIODC to
only populate if there is a DE;
%put NOTE: 14May2014 KB 12) Amended NDSN to come from SUPPDE;
%put NOTE: 27Jul2014 KB 13) Added EXNOTRFL;
%put NOTE: 12Sep2014 KB 14) Added FASFL & PPROTFL to ADSL keep;
%put NOTE:
=====;
options notes source source2 nofullstimer validvarname=upcase missing='
';
ods _all_ close;
ods listing;

*=====;

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

data adsl;
    set adam.adsl;
    keep studyid usubjid subjid: siteid age sex: race height weightb1
bmi ucpdgr1 ucpdgrln nicogr1 nicogrln targr1 targrln cob1
    enrfl scrfl exfl EXNOTRFL enfl complfl fupfl saffl randfl
trt: tr01: dthfl dtestdt FASFL PPROTFL; /* 13) KB 27Jul2014 */ /* 14) KB
12Sep2014 */
run;

*****;
* bring in SUPPDE ;
*****;

proc transpose data = sdtm.suppde out=suppde(drop = _:) prefix = t;
    var qval;
    by usubjid idvarval;
    id qnam;
run;

data suppde2(drop = idvarval);
    set suppde;
    deseql = input(idvarval,best.);
run;

proc sort data=suppde2;
    by usubjid deseql;
run;

*****;
* bring in DE ;
*****;

proc sort data = sdtm.de out = de;
    by usubjid deseql;
run;

data de2;
    merge de suppde2;
    by usubjid deseql;
    format deseqln avisitn 8. asstdt aenddt date9. asstdtm aendtm
datetime13. /*aerel $20.*/ /*ndsn*/ avisit $40.; /* 5) KB 29Apr2014 */
/* 8) KB 14May2014 */

    aerel = trim(taerel);
/* ndsn = trim(tndsn);*/ /* 5) KB 29Apr2014 */
    NDSN=STRIP(TNDSN); /* 12) KB 14May2014 */

    if index(deseql,'Major') then deseql = /*1*/2; /* 4) KB
29Apr2014 */

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else desevn = /*2*/1; /* 4) KB 29Apr2014 */

avisit = /*visit*/PROPCASE(VISIT); /* 3) KB 29Apr2014 */
avisitn = visitnum;

if length(destdtc) gt 10 then astdtm =
input(scan(destdtc,1,'T'),yymmdd10.)*86400+input(scan(destdtc,2,'T'),time
5.);
if not missing(astdtm) then astdt = datepart(astdtm);
else if length(destdtc) = 10 then astdt = input(destdtc,yymmdd10.);
if length(deendtc) gt 10 then aendtm =
input(scan(deendtc,1,'T'),yymmdd10.)*86400+input(scan(deendtc,2,'T'),time
5.);
if not missing(aendtm) then aendt = datepart(aendtm);
else if length(deendtc) = 10 then aendt = input(deendtc,yymmdd10.);

keep usubjid deseql despid spdevid determ decat dese: deacndev
destdtc astdtm astdt
destdy deendtc aendtm aendt deendy aerel /*ndsn*/NDSN visit
visitnum avisit avisitn DEDECOD EPOCH; /* 2) KB 29Apr2014 */ /* 5) KB
29Apr2014 */ /* 9) KB 14May2014 */ /* 12) KB 14May2014 */
run;

*****;
* Combine ADSL and DE data *;
*****;
* find period ;
*_mtotper;

data slde(drop = trt01: tr01: VISIT: DTESTDT); /* 1) SM 02Dec2013 */
merge adsl(where = (not missing(dtestdt))) de2(in = a);
by usubjid;
format aperiod trtan trtpn astday aenday 8. trta trtp $40. aperiodc
$10. anydefl $2.;
if a then anydefl = 'Y';
else anydefl = 'N';

astday = astdt - trtsdt + 1;
aenday = aendt - trtsdt + 1;
* declare full and partial dates for deriving period;
/* 11) START KB 14May2014 */
IF ANYDEFL='Y' THEN DO;
*_mperall(dvar1 = astdtm, dvar2 = astdt);

aperiodc = 'Period ' || put(aperiod,1.);
END;
/* 11) END KB 14May2014 */
run;

/* 12) START KB 14May2014 */
/* 5) START KB 29Apr2014 */
/*DATA RELREC;*/
/* SET SDTM.RELREC;*/

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/**/
/*      IF RDOMAIN NOT IN ('DE' 'DT') THEN DELETE;*/
/*RUN;*/

/*DATA RELREC2;*/
/*      SET RELREC(WHERE=(RDOMAIN='DT')) ;*/
/*      FORMAT NDSN $40.;*/ /* 8) KB 14May2014 */

/*      NDSN=IDVARVAL;*/
/**/
/*      KEEP USUBJID NDSN RELID;*/
/*RUN;*/
/**/
/*PROC SORT DATA=RELREC;*/
/*      BY USUBJID RELID;*/
/*RUN;*/
/**/
/*PROC SORT DATA=RELREC2;*/
/*      BY USUBJID RELID;*/
/*RUN;*/
/**/
/*DATA RELREC3;*/
/*      MERGE RELREC RELREC2;*/
/*      BY USUBJID RELID;*/
/**/
/*      IF RDOMAIN='DT' THEN DELETE;*/
/*RUN;*/
/**/
/*PROC TRANSPOSE DATA=RELREC3 OUT=RELREC4(DROP=_:);*/
/*      BY USUBJID NDSN;*/
/*      VAR IDVARVAL;*/
/*      ID IDVAR;*/
/*RUN;      */
/**/
/*DATA SLDE2;*/
/*      MERGE SLDE RELREC4;*/
/*      BY USUBJID SPDEVID;*/
/*RUN;*/
/* 5) END KB 29Apr2014 */
/* 12) END KB 14May2014 */

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

options replace;

data adde;
    set stdlib.adde /*slde*//*SLDE2*/SLDE; /* 5) KB 29Apr2014 */ /*
12) KB 14May2014 */
label aperiodc = 'Period (C)';
run;

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proc sort data = adde out = adam.adde(label= 'Device Events Analysis
Dataset');
/*    by usubjid determ destdtc;*/
/*    BY USUBJID DETERM DEDECOD DESTDTC; *//* 6) KB 29Apr2014 */
/*    BY USUBJID DETERM DEDECOD DECAT DESTDTC; */
    BY USUBJID DETERM DEDECOD DECAT DESTDTC DESPID; /* 10) KB 14May2014
*/

run;

options noreplace;
proc printto; run;
*=====;
* END OF PROGRAM CODE                               ;
*=====;
```