

CO Dataset

CO is another dataset that always does not exist and causes the same problem described above. Another SAS macro was developed to merge back the CO dataset to its related main domain.

SAS Macro

```
%macro co (mdsn=, domain=);
%let domain=%upcase(&domain);
proc contents data=work_&all_&out=content nodetails
noprint ;
run;

proc sql noprint;
select count(memname) into: n
from content
where memname='CO';
quit;

%if &n=0 %then %do;
data co;
length coval coval1 coval2 usubjid $200;
set &mdsn;
coval="";
coval1="";
&domain.seq=.;
usubjid="";
label coval='Comment' coval1='Comment'
coval2='Comment';
keep usubjid &domain.seq coval coval1 coval2;
run;
%end;

%else %do;
data co;
set &protlib.co;
where rdomain='&domain' and idvar='&domain.SEQ';
&domain.seq=input(idvarval,best.);
drop coseq domain idvar idvarval rdomain studyid;
run;
%end;
proc sort data=co;
by usubjid &domain.seq ;
run;
%mend;
%co(mdsn=ex, domain=EX);
```

Delete Empty Permissible Variable

Drop permissible variables created in above SAS programs but no any data collected at DB lock

SAS Code

```
data _null_ ;
set ex;
array b(*) _character_ ;
call symputx('char', dim(b));
run;

data _null_ ;
set ex end=last;
length dropvar $100;
array b(*) _character_ ;
array bm(*) y1-y&char (&char'0');
do i=1 to &char;
if b(i) ne "" then bm(i)=1;
end;
if last then do;
do i=1 to &char;
if bm(i)=0 and index(uppercase(vname(b(i))), 'COVAL')
then dropvar=compb(dropvar||'|'|vname(b(i)));
end;
call symput('drop', dropvar);
end;
run;
```

The macro variable &DROP will have a list of missing COVAL variables.

CONCLUSION

In the CDISC SDTM Implementation Guide, some empty datasets and permissible variables that contain null values will not be submitted. Thus, some SDTM domains or values in SUPP-- may not exist before all data are received. That will result in programming difficulty when we derive ADaM datasets. We discussed problems caused by relationship datasets SUPP-- and CO and provided out solution with SAS codes. There may be other problems when creating ADaM datasets from SDTM. We welcome further discussion.

CONTACT INFORMATION

Suwen Li
Everest Clinical Research Services, Inc.
 675 Cochrane Drive
 Suite 408, East Tower
 Markham, Ontario, Canada L3R 0B8
 Tel. 905.752.5253 Fax 905.752.5223
suwan.li@everestcrg.com