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* Project : ZRHM-REXA-07-JP

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* Program name : t1502020302_ZRHM-REXA-07_V1.sas

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* Author : W. Yang

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* Date created : 05/28/2015

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* Purpose : Create Table 15.2.2.3.2 Summary of Average Daily Product Use in Ambulatory Period

❖ PP Set

*

* Revision History :

*

* Date Author Ref Revision (Date in YYYYMMDD format)

*

*****,

```
%let prgname=T1502020302_ZRHM_REXA_07_JP_V1;
```

```
options nomprint nosymbolgen nomlogic validvarname=upcase;
```

```
options sasautos=("W:\pmp07\macros" sasautos) notes;
```

```
%init(delivery=9);
```

```
%titlecsv(prgname=&prgname.);
```

```
%put &title1;
```

```
%put &title2;
```

```
%put &APPENDIX;
```

```
%put &endpoint;
```

```
%put &outname.;
```

```
data adsl;
```

```
    set adam.adsl(where=(index(disccat,'Period 1')=0));
```

```
    if   trt01an=4 then do; trt=1; output; end;
```

```
    else if trt01an=5 then do; trt=2; output; end;
```

```
    else if trt01an=3 then do; trt=3; output; end;
```

```
    trt=4; output;
```

```
run ;
```

```
proc sort data=adam.adex out=adex;
```

```
    by usubjid avisitn avisit;
```

```
    where dtype='AVERAGE';
```

```
run;
```

```
data adex;
```

```
    set adex;
```

```
    if parcat3='AVERAGE DAILY PRODUCT USE IN AMBULATORY' and pprot2fl='Y' and pprot3fl='Y' and  
    pprot4fl='Y' then do;
```

```
        apuper=5;
```

```
        apuperc='Overall ambulatory period';
```

```
    end;
```

```
run;
```

```
%macro repeat(pop1fl=, sub=);
```

```
proc freq data =adsl(where=(&pop1fl.='Y' %if &sub=5 %then and pprot2fl='Y' and pprot3fl='Y';)) noprint;
    table trt/out=treatabt (rename =(count=total)drop=percent);
run;
```

Data _null_;

Set treatabt;

Call symput('n' || strip(put(trt, best.)),strip(put(total, best.)));

Run;

```
%put &n1 &n2 &n3 &n4;
```

*** Prepare data for analysis ***;

```
proc sql;
```

```
    create table data0 as
```

```
    select a.trt, b.*
```

```
    from adsl as a cross join adex as b
```

```
    where a.usubjid=b.usubjid and a.&pop1fl.='Y' and b.apuper=&sub.
```

```
    ;
```

```
quit;
```

*** Macro for Continuous variables statistics ***;

```
%macro mmeans(in_dsn=, class=, var=, order1=);
```

```
proc means data=&in_dsn noprint nway alpha=0.05;
```

```
    class trt &class;
```

```

var &var;

output out= stat1 n=_n mean=_mean std=_std median=_median min=_min max=_max lclm=_lclm
uclm=_uclm;

run;

data stat2 (drop=_:);

length n meansd median minmax ci $50 fm1-fm3 $10;

merge stat1 treatabt;

by trt;

deci=0;

fm1=cats(12,".",strip(put(deci+1,3.)));
fm2=cats(12,".",strip(put(deci+2,3.)));
fm3=cats(12,".",strip(put(deci+0,3.)));

if _std>. then _std=ceil(_std*100)/100;
if _uclm>. then _uclm=ceil(_uclm*10)/10;
if _lclm>. then _lclm=floor(_lclm*10)/10;
if _lclm=. and _std=0 and _mean>. then do; _lclm=_mean; _uclm=_mean; end;

if _mean ne . and _std ne . then meansd=strip(putn(_mean, fm1))||"
("||strip(putn(_std,fm2))||")";

else if _mean ne . and _std eq . then meansd=strip(putn(_mean, fm1))||" (NA)";

if _lclm ne . then ci=strip(putn(_lclm,fm1))||", "||strip(putn(_uclm,fm1));

if _min ne . then minmax=strip(putn(_min,fm3))||", "||strip(putn(_max,fm3));

if _n=total>. then n=strip(put(_n,best12.))||' (100)';

```

```

else if _n>. then n=strip(put(_n,best12.))||' ('||put(_n/total*100,5.1)||');

if total ne . then tot=strip(put(total,best12.));

if _median ne . then median=strip(putn(_median, fm1));

run;

```

```

proc sort; by &class. trt; run;

```

```

proc transpose data=stat2 out=stat3 prefix=col;

by &class;

var tot n meansd ci median minmax;

id trt;

run;

```

```

data final_&order1. (drop=_name_);

length stat $100;

set stat3;

if _name_='TOT' then do; stat="N"; order2 =1; end;

if _name_='N' then do; stat="n (%)"; order2 =2; end;

if _name_='MEANSD' then do; stat="Mean (SD)"; order2 =3; end;

if _name_='CI' then do; stat="95% CI"; order2 =4; end;

if _name_='MEDIAN' then do; stat="Median"; order2 =5; end;

if _name_='MINMAX' then do; stat="Min, Max"; order2 =6; end;

order1=&order1;

run;

%mend mmeans;

```

```
%mmeans(in_dsn=data0, class=paramn param apuper apuperc, var=aval, order1=&sub);
```

```
%mend;
```

```
%repeat(pop1fl=pprot2fl, sub=2);
```

```
%repeat(pop1fl=pprot3fl, sub=3);
```

```
%repeat(pop1fl=pprot4fl, sub=4);
```

```
%repeat(pop1fl=pprot4fl, sub=5);
```

```
data final;
```

```
set final_;;
```

```
param=tranwrd(param,'Ave. Daily ','');
```

```
param=tranwrd(param,'Average Daily ','');
```

```
param=tranwrd(param,' by Period','');
```

```
param=tranwrd(param,' in Ambulatory','');
```

```
param=strip(param);
```

```
if param='THS 2.2' then param='THSm2.2 Sticks';
```

```
if param='mCC' then param='CC/mCC';
```

```
if order2=1 then do;
```

```
if col1="" then col1='NA'; if col2="" then col2='NA';
```

```
if col3="" then col3='NA'; if col4="" then col4='NA';
```

```
end;
```

```
run;
```

```
proc sort data=final; by param paramn apuper apuperc; run;
```

```
data final(rename=(ord=paramn));  
    set final;  
    by param paramn apuper apuperc;  
    retain ord;  
    if first.param then ord=paramn;  
    drop paramn;  
run;
```

```
proc sort data=final; by paramn param apuper apuperc; run;
```

```
data final;  
    set final;  
    pageno=ceil(_n_/24);;  
run;
```

```
data odata.%sysfunc(scan(&prgname,1,'_'));;  
    set final;  
run;
```

```
%global totalpage;
```

```
data _null_;  
    set final end=eof;
```

```

if eof then do;

    call symput('totalpage', trim(left(put(pageno,8)))));

end;

run;


%put totalpage=&totalpage;


%trtrtfp(pgmname=&outname., pgmid=1, new=0, style=, bookmark=%lowcase(&outname.));

options nomprint nosymbolgen;


%macro reppart;


%do i = 1 %to &totalpage;


proc report data=final(where=(pageno=&i.)) headskip headline spacing=4 nowd split='|'
style=[outputwidth=100%] style(header column)=[protectspecialchars=off];

    column pageno paramn param apuper apuperc order2 stat col1-col3;


    define pageno /order order=internal noprint;

    define paramn /order order=internal noprint;

    define apuper /order order=internal noprint;

    define order2 /order order=internal noprint;

    define param /order "Product" style(column)=[cellwidth=15% asis=on]
style(header)=[just=l];

    define apuperc /order "Product Use|Time Periods" style(column)=[cellwidth=20% asis=on]
style(header)=[just=l];

```



```

define stat /display "Statistic" style(column)=[cellwidth=10% asis=on]
style(header)=[just=l];

define col1 /display "THSm2.2" flow style(column)=[cellwidth=12% just=c];

define col2 /display "mCC" flow style(column)=[cellwidth=12% just=c];

define col3 /display "SA" flow style(column)=[cellwidth=12% just=c];

/* define col4 /display "Overall PP Set" flow style(column)=[cellwidth=12% just=c];*/

compute before apuper ;

/* line "";*/

endcomp;

compute before _page_/style=[fontweight=bold fontsize=3.75];

line @1 "&title1 &title2";

line @1 "^R/RTF'\brdrb\brdrs\brdrw30\brsp20\b ' ";

endcomp;

compute after _page_/style=[fontsize=1.75];

line @1 "Note: mCC = Menthol conventional cigarettes; SA = Smoking abstinence; THSm2.2 =
Tobacco Heating System 2.2 Menthol; NA = Not applicable.";

line @1 "Note: Ambulatory periods defined as Period 2 ([Day 6 ambulatory ♦ Day 30 Visit]), Period
3 ([Day 30 Visit ♦ Day 60 Visit]) and Period 4 ([Day 60 Visit ♦ Day 90 Visit]).";

line @1 "Note: Percentages are based on the number of subjects indicated in each product use
period (N).";

/* line @1 "";*/

line @1 "&APPENDIX.";

line @1 "Study ID:ZRHM-REXA-07-JP Program: &fprgname..sas Status:
&repversion./&fdate. Page: &i of &totalpage.";

endcomp;

```

```
/* compute after pageno ;*/
```

```
/* line "";*/
```

```
/* endcomp;*/
```

```
run;
```

```
%end;
```

```
%mend;
```

```
%reppart;
```

```
ods listing;
```

```
ods rtf close;
```