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*****;
* Project          : ZRHM-REXA-07-JP
*
* Program name     : t15020449_ZRHM-REXA-07_V1.sas
*
* Author           : M.S.
*
* Date created      : 06/19/2015
*
* Purpose          : Create Table Table 15.2.4.49 Descriptive Statistics of Average Daily Product Use
*                   : in Ambulatory Period by Preferred Product Declared at Admission  FAS
*
* Revision History :
*
* Date      Author      Ref      Revision (Date in YYYYMMDD format)
*
*****;

%let prgname=T15020449_ZRHM_REXA_07_JP_V1;

options mprint validvarname=upcase;

options sasautos=("W:\pmp07\macros" sasautos) notes;
%init(delivery=9);
%titlecsv(prgname=&prgname., version=5);
%put &title1;
%put &title2;
%put &APPENDIX;
%put &endpoint;
%put &outname.;

data adsl;
    set adam.adsl(where=(fasfl='Y'/* and index(disccat,'Period 1')=0*/));
run ;

proc sort data=adam.adex out=adex;
    by usubjid;
    where fasfl='Y' and dtype='AVERAGE' and aval not in (.);
run;

data data0;
    merge adsl(in=a keep=usubjid trt01an) adex(in=b);
    by usubjid;
    if a and b;
    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';
    if param='mCC'      then param='CC/mCC';
run;

proc sort; by param paramn apuper apuperc; run;

data data1(rename=(ord=paramn));
    set data0;
    by param paramn apuper apuperc;
    if parcat3n=3 then do; apuper=5; apuperc='Overall'; end;

    retain ord;
    if first.param then ord=paramn;
    drop paramn;
run;

data data2;
    set data1;
    if prodpref='THS 2.2 menthol' then do; order1=1; trt=1; output; end;
    if prodpref='mCC' then do; order1=1; trt=2; output; end;
    if prodpref='SA' then do; order1=1; trt=3; output; end;
    if prodpref='No preference' then do; order1=1; trt=4; output; end;
    if prodpref>' ' then do; order1=1; trt=5; output; end;
run;

*** Macro for Continuous variables statistics ***;
%macro mmeans(in_dsn=, class=, var=, order1=);
proc means data=&in_dsn noprint nway alpha=0.05;
    class &class trt;
    var &var;
    output out= stat1 n=_n mean=_mean std=_std median=_median min=_min max=_max lclm=_lclm uclm=_uclm;
run;

proc sort data=stat1(keep=order1 paramn param) nodupkey out=shell; by order1 paramn param; run;

data shell;

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        set shell;
        if order1=1 then do; %do i=1 %to 5; trt=&i.; output; %end; end;
run;

data shell;
    set shell;
    length apuperc $40;
    apuper=2; apuperc='Period 2'; output;
    apuper=3; apuperc='Period 3'; output;
    apuper=4; apuperc='Period 4'; output;
    apuper=5; apuperc='Overall'; output;
run;

proc sort data=shell; by order1 paramn param apuper apuperc trt; run;
proc sort data=stat1; by order1 paramn param apuper apuperc trt; run;

data stat2;
    merge shell stat1 ;
    by order1 paramn param apuper apuperc trt;
    if _n=. then _n=0;
run;

proc sort data=stat2; by order1 paramn param apuper apuperc _n trt; run;

data stat2;
    set stat2;
    by order1 paramn param apuper apuperc _n trt;
    retain pmin;
    if first.apuperc then pmin=_n;
run;

proc sort data=stat2; by order1 paramn param descending pmin apuper apuperc trt; run;

data stat3;
    set stat2;
    by order1 paramn param descending pmin apuper apuperc trt;
    retain mpmin;
    if first.param then mpmin=pmin;
    if order1 in (2 3 4) and mpmin<=4 then delete;
run;

proc sort; by &class trt; run;

data stat4 (drop=_);
    length n meansd median minmax ci $50 fm1-fm3 $10;
    set stat3 ;
    deci=1;

    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*1000)/1000;
    if _uclm>. then _uclm=ceil(_uclm*100)/100;
    if _lclm>. then _lclm=floor(_lclm*100)/100;
    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>. then n=strip(put(_n,best12.));
    if _median ne . then median=strip(putn(_median, fm1));
run;

proc transpose data=stat4 out=stat5 prefix=col;
    by &class;
    var n meansd ci median minmax;
    id trt;
run;

data final_&order1. (drop=_name_);
    length stat $100;
    set stat5;
    if _name_='N' then do; stat="n"; order2 =1; end;
    if _name_='MEANSD' then do; stat="Mean (SD)"; order2 =2; end;
    if _name_='CI' then do; stat="95% CI"; order2 =3; end;
    if _name_='MEDIAN' then do; stat="Median"; order2 =4; end;
    if _name_='MINMAX' then do; stat="Min, Max"; order2 =5; end;
run;
%mend mmeans;

%mmeans(in_dsn=data2, class=order1 paramn param apuper apuperc, var=aval, order1=1);

data final;
    set final_;;

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        if order2=1 then do;
            if col1='' then col1='0'; if col2='' then col2='0';
            if col3='' then col3='0'; if col4='' then col4='0';
        end;
run;

proc sort data=final; by order1 paramn param apuper apuperc; run;

data final;
    set final;
    by order1 paramn param apuper apuperc;
    retain count pageno 0;
    if first.order1 then do;
        pageno+1;
        count=0;
    end;
    count+1;
    if count=21 then do;
        pageno+1;
        count=1;
    end;
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;

%trtrtfg(pgmname=&outname., pgmid=1, new=0, style=, bookmark=%lowcase(&outname.));
options nomprint nosymbolgen;
%let sline=\brdrb\brdrs\brdrw10\brsp20;

%macro reppart;

    %do i = 1 %to &totalpage;

data out;
    set final(where=(pageno=&i.));
    call symput('order1', strip(put(order1,8)));
run;

proc report data=out headskip headline spacing=4 nowd split='|' style=[outputwidth=100%] style(header column)=[protects
pecialchars=off];
    column pageno order1 paramn param apuper apuperc order2 stat
    ("^R/RTF'\brdrb\brdrs ' Product preference" col1-col4) col5;

    define pageno /order order=internal noprint;
    define order1 /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=1];
    define apuperc /order "Period" style(column)=[cellwidth=10% asis=on] style(header)=[just=1];
    define stat /display "Statistic" style(column)=[cellwidth=10% asis=on] style(header)=[just=1];
    define col1 /display "THS 2.2 menthol" 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 "No preference" flow style(column)=[cellwidth=12% just=c];
    define col5 /display "Overall" 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.";
        line @1 "Note: Periods defined as Period 2 ([Day 6 ambulatory ȳ Day 30 Visit]), Period 3 ([Day 30 Visit ȳ Day 60
Visit]) and Period 4 ([Day 60 Visit ȳ Day 90 Visit]).";
        line @1 " ";
    /*
        line @1 "&APPENDIX.";
        line @1 "Study ID:ZRHM-REXA-07-JP Program: &fprgname..sas Status: &repversion./&fdate. P
age: &i of &totalpage.";
    endcomp;

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/* compute after pageno ;*/  
/* line "" ;*/  
/* endcomp ;*/  
run;  
%end;  
  
%mend;  
%reppart;  
  
ods listing;  
ods rtf close;
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