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* Project          : ZRHM-REXA-07-JP
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* Program name     : t15020450_ZRHM-REXA-07_V1.sas
*
* Author          : M.S.
*
* Date created     : 06/24/2015
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* Purpose          : Descriptive Statistics of Product Use Categories by Preferred
*                   Product Declared at Admission  FAS
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* Revision History :
*
* Date      Author      Ref      Revision (Date in YYYYMMDD format)
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%let prgname=T15020450_ZRHM_REXA_07_JP_V1;

options mprint validvarname=upcase;

options sasautos=("W:\pmp07\macros" sasautos) notes;
%init(delivery=9);
%titlecsv(prgname=&prgname., version=3);
%put &title1;
%put &title2;
%put &APPENDIX;
%put &endpoint;
%put &outname.;

data pop1 pop2 pop3 pop4;
    set adam.adsl(where=(fasfl='Y'));
    if prodpref='THS 2.2 menthol' then output pop1;
    if prodpref='mCC' then output pop2;
    if prodpref='SA' then output pop3;
    if prodpref='No preference' then output pop4;
run ;

data shell;
    length stat $50;
    do period=2 to 5;
        order1=1; order2=0; stat='THSm2.2 Arm'; output;
        order1=1; order2=1; stat='THS 2.2 ([70-100]%)'; output;
        order1=1; order2=2; stat=' Exclusively THS 2.2 (100%)'; output;
        order1=1; order2=3; stat=' Primarily THS 2.2 ([95-100]%)'; output;
        order1=1; order2=4; stat=' Predominantly THS 2.2 ([70-95]%)'; output;
        order1=2; order2=1; stat='Dual ([30-70]%)'; output;
        order1=2; order2=2; stat=' Dual mostly THS 2.2 ([60-70]%)'; output;
        order1=2; order2=3; stat=' Dual balanced ([40-60]%)'; output;
        order1=2; order2=4; stat=' Dual mostly CC ([30-40]%)'; output;
        order1=3; order2=1; stat='CC ([0-30]%)'; output;
        order1=3; order2=2; stat=' Predominantly CC ([5-30]%) '; output;
        order1=3; order2=3; stat=' Primarily CC ([0-5]%)'; output;
        order1=3; order2=4; stat=' Exclusively CC (0%)'; output;

        order1=4; order2=2; stat='Abstinent'; output;
        order1=4; order2=3; stat='Predominantly Abstinent'; output;
        order1=4; order2=4; stat='Not Abstinent'; output;

        order1=5; order2=5; stat='Missing'; output;
        order1=5; order2=6; stat='Discontinued in previous period'; output;

        order1=6; order2=0; stat='mCC Arm'; output;
        order1=6; order2=1; stat='CC'; output;
        order1=6; order2=2; stat=' CC Only (Exclusively CC)'; output;
        order1=6; order2=3; stat=' CC Dual (Use of other products)'; output;
        order1=6; order2=5; stat='Missing'; output;
        order1=6; order2=6; stat='Discontinued in previous period'; output;

        order1=7; order2=0; stat='SA Arm'; output;
        order1=7; order2=2; stat='Abstinent'; output;
        order1=7; order2=3; stat='Predominantly Abstinent'; output;
        order1=7; order2=4; stat='Not Abstinent'; output;
        order1=7; order2=5; stat='Missing'; output;
        order1=7; order2=6; stat='Discontinued in previous period'; output;
    end;
run;

%macro doit;

%do i=1 %to 4;

data pop&i;
    set pop&i;
    if trt01an=4 then do; trt=1; output; end;
    else if trt01an=5 then do; trt=2; output; end;

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

proc freq data =pop&i noprint;
    table trt/out=treatabt&i (rename =(count=total)drop=percent);
run;

data _null_;
    Set treatabt&i;
    Call symput("n&i"||strip(put(trt, best.)),strip(put(total, best.)));
Run;

data temp&i.1;
    set pop&i end=eof;
%do j=2 %to 5;
    if trt01an=4 and pucat&j.ex='Exclusively THS 2.2' then do; order1=1; order2=2; period=&j.; output; end;
    if trt01an=4 and pucat&j.='Primarily THS 2.2' then do; order1=1; order2=3; period=&j.; output; end;
    if trt01an=4 and pucat&j.='Predominantly THS 2.2' then do; order1=1; order2=4; period=&j.; output; end;

    if trt01an=4 and pucat&j.='Dual Mostly THS 2.2' then do; order1=2; order2=2; period=&j.; output; end;
    if trt01an=4 and pucat&j.='Dual Balanced' then do; order1=2; order2=3; period=&j.; output; end;
    if trt01an=4 and pucat&j.='Dual Mostly CC' then do; order1=2; order2=3; period=&j.; output; end;

    if trt01an=4 and pucat&j.='Predominantly CC' then do; order1=3; order2=2; period=&j.; output; end;
    if trt01an=4 and pucat&j.='Primarily CC' then do; order1=3; order2=3; period=&j.; output; end;
    if trt01an=4 and pucat&j.ex='Exclusively CC' then do; order1=3; order2=4; period=&j.; output; end;

    if trt01an=4 and pucat&j.='Abstinent' then do; order1=4; order2=2; period=&j.; output; end;
    if trt01an=4 and pucat&j.='Predominantly Abstinent' then do; order1=4; order2=3; period=&j.; output; end;
    if trt01an=4 and pucat&j.='Not Abstinent' then do; order1=4; order2=4; period=&j.; output; end;

    if trt01an=5 and pucat&j. in ('CC Only') then do; order1=6; order2=2; period=&j.; output; end;

    if trt01an=3 and pucat&j.='Abstinent' then do; order1=7; order2=2; period=&j.; output; end;
    if trt01an=3 and pucat&j.='Predominantly Abstinent' then do; order1=7; order2=3; period=&j.; output; end;
    if trt01an=3 and pucat&j.='Not Abstinent' then do; order1=7; order2=4; period=&j.; output; end;
%end;

    if trt01an=4 and pucat5='Missing' and index(disccat,'1')=0 then do; order1=5; order2=5; period=5;; output; end;
    if trt01an=5 and pucat5='Missing' and index(disccat,'1')=0 then do; order1=6; order2=5; period=5;; output; end;
/*    if trt01an=3 and pucat5='Missing' and index(disccat,'1')=0 then do; order1=7; order2=5; period=5;; output; end;*/

    if trt01an=4 and prxmatch("m/1/oi",disccat) then do; order1=5; order2=6; period=2; output; end;
    if trt01an=4 and prxmatch("m/1|2/oi",disccat) then do; order1=5; order2=6; period=3; output; end;
    if trt01an=4 and prxmatch("m/1|2|3/oi",disccat) then do; order1=5; order2=6; period=4; output; end;
    if trt01an=4 and prxmatch("m/1|2|3|4/oi",disccat) then do; order1=5; order2=6; period=5; output; end;

    if trt01an=5 and prxmatch("m/1/oi",disccat) then do; order1=6; order2=6; period=2; output; end;
    if trt01an=5 and prxmatch("m/1|2/oi",disccat) then do; order1=6; order2=6; period=3; output; end;
    if trt01an=5 and prxmatch("m/1|2|3/oi",disccat) then do; order1=6; order2=6; period=4; output; end;
    if trt01an=5 and prxmatch("m/1|2|3|4/oi",disccat) then do; order1=6; order2=6; period=5; output; end;

    if trt01an=3 and prxmatch("m/1/oi",disccat) then do; order1=7; order2=6; period=2; output; end;
    if trt01an=3 and prxmatch("m/1|2/oi",disccat) then do; order1=7; order2=6; period=3; output; end;
    if trt01an=3 and prxmatch("m/1|2|3/oi",disccat) then do; order1=7; order2=6; period=4; output; end;
    if trt01an=3 and prxmatch("m/1|2|3|4/oi",disccat) then do; order1=7; order2=6; period=5; output; end;
run;

data temp&i.2;
    set temp&i.1;
    output;
    if order1 in (1 2 3) and order2>1 then do; order2=1; output; end;
    if order1 in (6) and order2=2 then do; order2=1; output; end;
run;

proc sort data=temp&i.2 nodupkey; by usubjid order1 order2 period; run;

%macro mfreq(in_dsn=, n_max=, order1=, n=, class=);
proc means data=&in_dsn noprint nway;
    class &class;
    var trt;
    output out=stat1&i n=count;
run;

data stat2&i (drop=_type_ _freq_ percentx);
    set stat1&i;
    length col&i $50;
    if count>. then percentx=count/%eval(&n.)*100;
    if percentx=100 then col&i=put(count,4.)||' (100)';
    else if percentx>=0.1 then col&i=put(count,4.)||' (||strip(put(percentx,5.1))||)';
    else if percentx>. then col&i=put(count,4.)||' (<0.1)';
run;

data final&i._&order1.;
    set stat2&i;

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run;
%mend mfreq;

%mfreq(in_dsn=temp&i.2(where=(order1<=5)), n_max=5, order1=1, n=&&n&i.1, class=period order1 order2);
%mfreq(in_dsn=temp&i.2(where=(order1=6)), n_max=5, order1=2, n=&&n&i.2, class=period order1 order2);
%mfreq(in_dsn=temp&i.2(where=(order1=7)), n_max=5, order1=3, n=&&n&i.3, class=period order1 order2);

data final1&i;
    set final&i._;
    by period order1 order2;
run;

data final1&i;;
    set final1&i;
    by period order1 order2;
output;
    if order1=1 and first.order1 then do;
        tot&i=&&n&i.1; order2=0; output;
    end;
    else if order1=6 and first.order1 then do;
        tot&i=&&n&i.2; order2=0; output;
    end;
    else if order1=7 and first.order1 then do;
        tot&i=&&n&i.3; order2=0; output;
    end;
run;

proc sort data=final1&i;;
    by period order1 order2;
run;
%end;
data final;
    merge shell final11-final14;
    by period order1 order2;

    if order1 in (1,6,7) and order2=0 then do;
        stat='^S={font_weight=bold}'||strip(stat);
        %do i=1 %to 4; col&i.='^S={font_weight=bold just=c}'||strip(put(tot&i,best.)); %end;
    end;
    if col1='' then col1='0'; if col2='' then col2='0';
    if col3='' then col3='0'; if col4='' then col4='0';

length periodx $20;
    periodx='Period '||strip(put(period,best.));
if period=5 then periodx='Ambulatory';

    if order1 in (7) then pageno=(period-1)*3;
    else if order1 in (4 5 6) then pageno=(period-2)*3+2;
    else pageno=(period-2)*3+1;
run;

%mend;
%doit;

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

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

%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;
options nomprint nosymbolgen;

%macro reppart;

    %do i = 1 %to &totalpage;

        data final&i;
            set final;
            where pageno=&i;
            call symputx("period",periodx);
run;

proc report data=final(where=(pageno=&i.)) headskip headline spacing=4 nowd split='|' style=[outputwidth=100%] style(he
ader column)=[protectspecialchars=off];
    column pageno order1 order2 stat ("^R/RTF'\brdrb\brdrs ' Product preference" col1-col4);

    define pageno /order order=internal noprint;

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define order1 /order order=internal noprint;
define order2 /order order=internal noprint;
define stat /display "Product Use Categorization" style(column)=[cellwidth=30% 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];

compute before order1 ;
line "";
endcomp;

compute before _page_ /style=[fontweight=bold fontsize=3.75];
line @1 "&title1 &title2";
line @1 " ";
line @1 "Product Use Time Period: &period";
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: Ambulatory periods defined as Period 2 ([Day 6 ambulatory ¶ Day 30 Visit]), Period 3 ([Day 30 Vis
it ¶ 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 the column header (N).";
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;

compute after pageno ;
line "";
endcomp;

run;
%end;

%mend;
%reppart;

ods listing;
ods rtf close;

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