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/*=====
| Covance Study Number      : 000000106343      |
| Program Name              : f_mceq_fas.sas      |
| Purpose                   : To create Figure 15.1.2.6.1      |
| Input Data                : tflds.t_15_02_04_54_01_f      |
| Output Data               : F_15_01_02_06_01      |
| Macros Called             :                      |
| Originally Performed by   :Jyothsna Reddy      |
| Date                     : 28APR2015          |
|=====
| Modification History
|-----
| Modified by              :                      |
| Modification Date        :                      |
| Modification Description :                      |
+=====*/

options replace;
proc datasets lib=work kill memtype=data nolist;
run;
%m_printto;
%let tfldno=F_15_01_02_06_01;

/* Standard - leave this */
%let TFL_Part=%scan(&_SASPROGRAMFILE,-3,%str(/));

/* Standard - leave this */

data _null_;
    tmp="%TFL_Part";
    if tmp not in ("dev" "qc") then call symput("TFL_Part", "prod");
    call symput('TFLpath', compress("&_SASPROGRAMFILE", ""));
run;

options notes source source2 nofullstimer validvarname=upcase
nonumber nodate orientation=portrait missing=' ';
ods graphics on; /* As we are effectively using ODS graphics we need to ensure that it is turned on */
ods graphics / height=12cm width=16cm noborder; /* Removes border around the image */
ods path reset;
/* please include styles template */
%include "/cvn/projects/prj/development/000000106343/dev/figures/figtmplt.sas";
ods rtf toc_data file="/cvn/projects/prj/data/000000106343/TFL/dev/Tables/&tfldno..rtf" style=t106343_g startpage=yes headery=1440 footery=1440 ;

ods exclude all;

data forest;
length trta $20;
set tflds.t_15_02_04_54_01_f;

if TRTPN=5 then TRTA="mCC";
if TRTPN=4 then TRTA="THSm2.2";
avalu="PPM";if not missing(TRTA);
if apuper ne 1 and avisitn=10 then delete;

run;

proc sort data=forest out=forest1;
by param ;
run;

data dforest1(keep= param paramn avalu APUPER APUPERC avisit1 trtpn trta avisitn avisit mean lclm uclm gmean tpt);
format gmean 6.2;
length tpt 3 avisit1 8;
set forest1;
IF avisitn=100 THEN avisit1=0;
IF avisitn=98 THEN avisit1=0;
IF avisitn=10 THEN avisit1=0;
IF avisitn=101 THEN avisit1=1;
IF avisitn=102 THEN avisit1=2;
IF avisitn=103 THEN avisit1=3;
IF avisitn=104 THEN avisit1=4;
IF avisitn=105 THEN avisit1=5;
IF avisitn=130 THEN avisit1=6;
IF avisitn=160 THEN avisit1=7;
IF avisitn=190 THEN avisit1=8;
if not missing(lclm) then lclm = 0.1*floor(lclm/0.1);

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        if not missing(uclm) then uclm = 0.1*ceil(uclm/0.1);
tpt=avisit1;
mean=round(mean,0.1);
gmean=mean;IF AVISITN=99 THEN DELETE;
run;

/*Use a proc summary to find the maximum value of the Y axis which needs to be presented for the first plot*/
proc summary data=dforest1;
  by param ;
  var uclm;
  output out =axis1 max=max1 ;
run;
proc summary data=dforest1;
  by param ;
  var lclm;
  output out =axis2 min=min1;
run;

data maxaxis1;
  merge axis1 axis2(drop=_type_ _freq_);
  by param;
  max2=(ceil(max1));
  min2=floor(min1);
  /*Use mod 2 to ensure axis limit is an even number so the increment can be 2*/
  if mod(max2,2)=0 then max2=max2;
  else if mod(max2,2)=1 then max2=max2+1;

  if mod(min2,2)=0 then min2=min2;
  else if mod(min2,2)=1 then min2=min2-1;

  if param="Aversion Subscale" then do;
    min2=0;max2=7;
  end;
  min=put(min2,best.);
  max=put(max2,best.);
  inc=put(ceil(max2-min2),8.);
  keep param max min inc;
run;

data adbx3;
  merge dforest1 maxaxis1;
  by param ;
  if paramn=18 then do;par=1;max="7";inc="1";end;
  else if paramn=19 then par=2;
  else if paramn=20 then par=3;
  else if paramn=21 then par=4;
  else if paramn=22 then par=5;

run;

PROC SQL;
CREATE TABLE ADBX3_X AS
SELECT PARAM, TRTA, AVISIT, MEAN, lclm, uclm
FROM ADBX3;
QUIT;

PROC EXPORT DATA=ADBX3_X DBMS=XLSX OUTFILE="/cvn/projects/prj/data/000000106343/TFL/dev/Tables/&tfino...xlsx" REPLACE;
SHEET=Sheet1;

PROC FORMAT;
VALUE XAXIS
  4.5='1'
  9='2'
  13.5='3'
  18='4'
  22.5='5'
      45='30'
      67.5='60'
      90='90'
  0='Baseline'
;
RUN;

title;
footnote;
proc sort data=adbx3;

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by par;
data paging; /* paging is derived normally as with RTF type TFL */

    set adbx3 end=last;
    page = 1;
    if trtpn=3 then trtord=3;
else if trtpn=5 then trtord=2;
else if trtpn=4 then trtord=1;

    if tpt=1 then newvis=4.5;
else if tpt=2 then newvis=9;
else if tpt=3 then newvis=13.5;
else if tpt=4 then newvis=18;
else if tpt=5 then newvis=22.5;
else if tpt=6 then newvis=45;
else if tpt=7 then newvis=67.5;
else if tpt=8 then newvis=90;
else newvis=tpt;

run;

proc sort data=paging out=uniqpar nodupkey;by paramn;run;

data uniqpar;
set uniqpar end=last;
if last then pg=put(_n_,best.);
call symput("maxpage", strip(pg));
run;
%put &maxpage;

%macro graph();
%do i=1 %to 1; /* paging can either be done through a do loop or multiple macro calls */
    %do j=1 %to &maxpage %by 1;

        data plot1;
            set paging;
        where par=&j;
        run;
proc sql noprint;
select param into:param trimmed
from plot1;
quit;
data plot;
set plot1;
call symput("unit",strip(avalu));
call symput("max1",max);
call symput("min1",min);

        call symput("inc1",inc);

run;
proc template;
define statgraph splot ;
beginningraph ;
layout lattice;
%if &j=3 %then %do;
    layout overlay / border=false
    xaxisopts=(linearopts=(tickvaluelist=(0 4.5 9 13.5 18 22.5 45 67.5 90) TICKVALUEFITPOLICY=ROTATE )
        label="Study Day")
    yaxisopts=(linearopts=(tickvaluesequence=(start=0 end=7 increment=1)
        viewmin=0 viewmax=7)
        label=" ") cycleattrs=false;
%end;
%else
    %if &j=1 %then %do;
        layout overlay / border=false
        xaxisopts=(linearopts=(tickvaluelist=(0 4.5 9 13.5 18 22.5 45 67.5 90) TICKVALUEFITPOLICY=ROTATE )
            label="Study Day")
        yaxisopts=(linearopts=(tickvaluesequence=(start=0 end=7 increment=1)
            viewmin=0 viewmax=7)
            label=" ") cycleattrs=false;
%end;

%else %do;
        layout overlay / border=false
        xaxisopts=(linearopts=(tickvaluelist=(0 4.5 9 13.5 18 22.5 45 67.5 90) TICKVALUEFITPOLICY=ROTATE )
            label="Study Day")
        yaxisopts=(linearopts=(tickvaluesequence=(start=0 end=7 increment=1)

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                viewmin=0 viewmax=7)
                label="&param") cycleattrs=false;
    %end;

    seriesplot x=newvis y=gmean / index=trtpn primary=true group=trta display=(markers)
                legendlabel="mean" name="series";
    scatterplot x=newvis y=gmean / index=trtpn group=trta yerrorlower=lclm yerrorupper=uclm
                legendlabel="mean" name="scatter" ;
    discretelegend "series";
    endlayout;
%if &j=3 %then %do;

    rowaxes;
    rowaxis / griddisplay=on display=(tickvalues);
endrowaxes;

rowheaders;
    layout gridded / columns=2 ;
    entry "Enjoyment of Respiratory Tract" / textattrs=GraphLabelText rotate=90 ;
    entry "Sensation Subscale" / textattrs=(size=11) rotate=90 ;
    endlayout;
endrowheaders;
%end;
    endlayout;

    endgraph;
end;
run;
ods select all;

    ODS ESCAPECHAR='^';
    ODS RTF PREPAGE="^S={outputwidth=100% just=1 font_size=12pt font_weight=bold background=white foreground=black font_face=arial}^R/RT
F'\QL' Figure 15.1.2.6.1 MCEQ Subscales Arithmetic Mean and 95% CI - PP Set";

ods rtf style=t106343_g;
proc sort data=plot; by trtord;run;

    proc sgrender data=plot template=splot; /* applies the above template to the specified data */
    FORMAT newvis XAXIS.;
    run;
    ODS RTF TEXT="^S={outputwidth=100% just=1 font_size=9pt background=white foreground=black font_face=arial}^R/RTF'\QL' Note: Baseline
    is summarized using the baseline data from the PP Set for Period 1.";

    ODS RTF TEXT="^S={outputwidth=100% just=1 font_size=9pt background=white foreground=black font_face=arial}^R/RTF'\QL' Note: mCC = Me
nthol conventional cigarettes; SA = Smoking abstinence; THSm2.2 = Tobacco Heating System 2.2 Menthol.";

    ODS RTF TEXT="^S={outputwidth=100% just=1 font_size=9pt background=white foreground=black font_face=arial}^R/RTF'\QL' Note: Baseline
    is the last assessment prior to first product use in mCC/THS 2.2 arms on Day 1 or last assessment prior to 10:00 AM in SA a
    ODS RTF TEXT="^S={outputwidth=100% just=1 font_size=9pt background=white foreground=black font_face=arial}^R/RTF'\QL' Note: Scores o
f MCEQ subscales are reported on a 7-point scale. Higher scores indicate greater intensity on that scale.";

    ODS RTF TEXT="^S={outputwidth=100% just=1 font_size=9pt background=white foreground=black font_face=arial}^R/RTF'\QL'";
    ODS RTF TEXT="^S={outputwidth=100% just=1 font_size=9pt background=white foreground=black font_face=arial}^R/RTF'\QL' Appendix 15.2.
4.54.1";
    ODS RTF TEXT="^S={outputwidth=100% just=1 font_size=9pt background=white foreground=black font_face=arial}^R/RTF'\QL' Study ID: ZRHM
-REXA-08-US Program: f_mceq_pp.sas &sysdate Status: &status. (Page &j of &maxpage)";

%end;
%end;
%mend graph;
%graph;

ods _all_ close;
ods graphics / reset;
%m_logchk;

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