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/*=====
| Covance Study Number      : 000000106343      |
| Program Name              : f_mceq_fas.sas      |
| Purpose                   : To create Figure 15.1.2.6.2      |
| Input Data                : tflds.t_15_02_04_54_02_f      |
| Output Data               : F_15_01_02_06_02      |
| 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 tflno=F_15_01_02_06_02;

/* 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;

%put &tflpath;
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/figtplt.sas";
ods rtf toc_data file="/cvn/projects/prj/data/000000106343/TFL/dev/Tables/&tflno..rtf" style=t106343_g startpage=yes headery=1440 fo
otery=1440 ;

ods exclude all;

/*****
data forest;
    length trta $50;

    set tflds.t_15_02_04_54_02_f;

    if trtpn=5 then TRTA="mCC";
    if trtpn=4 then TRTA="THSm2.2";
    if not missing(TRTA);
run;

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

data dforest1(keep= param paramn 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;

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    if not missing(lclm) then lclm = 0.1*floor(lclm/0.1);
        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 /*APUPER*/;
    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;

    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 par=1;
    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/&tflno...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;
by par;
data paging; /* paging is derived normally as with RTF type TFL */

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        set adbx3 end=last;
        page = 1;
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("max1",max);
    call symput("min1",min);

        call symput("inc1",inc);

run;
proc template;
    define statgraph splot ;
        begingraph ;
        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 %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="&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=trtord group=trta yerrorlower=lclm yerrorupper=uc1m
            legendlabel="mean" name="scatter" ;
        discretelegend "series";
    endlayout;
        %if &j=3 %then %do;

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

rowheaders;

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    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="{outputwidth=100% just=1 font_size=12pt font_weight=bold background=white foreground=black font_face=arial}^R/RTF\QL' Figure 15.1.2.6.2 MCEQ Subscales Arithmetic Mean and 95% CI - FAS";

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="{outputwidth=100% just=1 font_size=9pt background=white foreground=black font_face=arial}^R/RTF\QL'";
ODS RTF TEXT="{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="{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="{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="{outputwidth=100% just=1 font_size=9pt background=white foreground=black font_face=arial}^R/RTF\QL'";
ODS RTF TEXT="{outputwidth=100% just=1 font_size=9pt background=white foreground=black font_face=arial}^R/RTF\QL' Appendix 15.2.
4.54.2";
ODS RTF TEXT="{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_fas.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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