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%_mprintto;
options notes nosource;
proc datasets lib=work nolist memtype=data kill; quit;
%put NOTE:
=====;
%put NOTE: Covance Study Number : 000000106324;
%put NOTE: Client Protocol ID   : ZRHR-REXC-03-EU;
%put NOTE: Program Name        : t_mceq.sas;
%put NOTE: Purpose              : table of MNWSand total score;
%put NOTE: ;
%put NOTE: Input Data           : ADAM.ADSL ADAM.ADQSPA;
%put NOTE: Output               : t_15_2_4_47(mceq);
%put NOTE: Macros Called        : _MPRINTTO;
%put NOTE: ;
%put NOTE: Programmed by        : cvn_jhardman;
%put NOTE: Creation Date        : 2014-07-30;
%put NOTE: SAS Version          : 9.3;
%put NOTE: ;
%put NOTE: == Latest Run
=====;
%put NOTE: Run by                : &sysuserid;
%put NOTE: Date/Time             :
%sysfunc(putn(%sysfunc(date()),e8601da.))T%sysfunc(putn(%sysfunc(time()),
e86011z.));
%put NOTE: ;
%put NOTE: == Modification History
=====;
%put NOTE: Date      Initials   No. Reason;
%put NOTE: 29Aug2014  JMH        1) Added NMIS to check for missing
values;
%put NOTE: 18Sep2014  JR          2) Updated baseline footnote;
%put NOTE: 19Sep2014  KB          3) Amended quartiles to use floor &
ceil functions to match other tables;
%put NOTE: 22Sep2014  KB          4) Amended percentage change columns to
use rounding;
%put NOTE:
=====;
options notes source source2 nofullstimer validvarname=upcase missing='
';
ods _all_ close;
ods listing;

*=====;
* START OF PROGRAM CODE                                     ;
*=====;

%let tflno=T_15_02_04_47(mceq);

%let TFL_Part=%scan(&_SASPROGRAMFILE,-3,%str(/));

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

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run;

*****;
* read in data ;
*****;

/* Calculate totals for products */
data adsl;
    set adam.adsl(where=(pprotfl='Y' and fasfl='Y'));
    analgrln=1;
    analgrl='FAS';
    trtord=trt01an;
run;

proc sort data=adsl nodupkey out=adsl1;
    by analgrln analgrl trtord subjid;
run;

proc freq data=adsl1(where=(not missing(trtord))) noprint;
    table analgrln*analgrl*trtord/ out =totals2(drop=percent
rename=(count=total));
run;

data totals3;
    set totals2;

    call symput('trt'||strip(put(trtord,best.)),strip(put(total,best.)));
run;

proc sort data=totals3;
    by analgrln analgrl trtord;
run;

/*Bring in appropriate data from adqspa*/
data adqspa;
    set adam.adqspa(where=(anl01fl='Y' and pprotfl='Y' and fasfl='Y'
and index(paramcd,'MCEQ')));
    if ablf1='Y' then do; avisit='Baseline'; avisitn=100; end;
    if avisit ne 'Baseline' and avisitn lt 101 then delete;
run;

/*Raw values*/
data adqspa_orig;
    set adqspa;
    analgrln=1;
    analgrl='FAS';

    statval=aval;
run;

proc sort data=adqspa_orig;
    by analgrln analgrl trtan trta parcat2n parcat2 paramn param paramcd
avisitn avisit;
run;

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proc means data=adqspa_orig alpha=0.05 noprint;
    var statval;
    by analgr1n analgr1 trtan trta parcat2n parcat2 paramn param paramcd
    avisitn avisit;
    output out=results02_orig NMISS=MISS1 n=n1 mean=mean1 std=std1
    median=median1 min=min1 max=max1 q1=q1 q3=q3 lclm=lci1 uclm=uci1; /* 1)
    JMH 29Aug2014 */
run;

data results03_orig;
    set results02_orig;
    attrib meansd length=$20.
        minmax length=$20.
        n length=$20.
        median length=$20.
        ci length=$20.
        quart length=$20.;

    n = left(compress(put(n1,8.)));
    if not missing(median1) then median =
left(compress(put(round(median1,0.1),8.1)));
    if not missing(mean1) and not missing(std1) then meansd =
left(compress(put(round(mean1,0.1),8.1))) || ' (' ||
left(compress(put(0.01*ceil(std1/0.01),8.2))) || ')';
    if not missing(min1) and not missing(max1) then minmax =
left(compress(put(min1,8.))) || ', ' || left(compress(put(max1,8.)));
    if not missing(lci1) and not missing(uci1) then ci =
strip(strip(compress(put(0.1*floor(lci1/0.1),8.1))) || ', ' ||
strip(compress(put(0.1*ceil(uci1/0.1),8.1)));
/*    if not missing(q1) and not missing(q3) then quart =
strip(strip(put(round(q1,0.1),8.1)) || ', ' ||
strip(put(round(q3,0.1),8.1))); */
    IF NOT MISSING(Q1) AND NOT MISSING(Q3) THEN QUART =
STRIP(PUT(0.1*FLOOR(Q1*10),10.1)) || ', ' ||
STRIP(PUT(0.1*CEIL(Q3*10),10.1)); /* 3) KB 19Sep2014 */

    drop n1 mean1 std1 median1 min1 max1 lci1 uci1 q1 q3;
run;

data results04_orig; /*Create text as required in output*/
    set results03_orig;
    attrib paramc length = $100.;

    if index(parcat2,'Factor')=0 then paramc=strip(param);
    else paramc=strip(parcat2);

    drop param paramcd parcat2 parcat2n;
run;

proc sort data=results04_orig;
    by paramn paramc avisitn avisit;
run;

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proc transpose data=results04_orig out=results05_orig prefix=o
name=varname;
    by paramn paramc avisitn avisit;
    var n meansd median minmax ci quart;
    id trtan;
    idlabel trta;
run;
/*End of raw values*/

/*%Change values*/

data adqspa_chg;
    set adqspa;
    analgrln=1;
    analgrl='FAS';

    statval = pchg;
run;

proc sort data=adqspa_chg;
    by analgrln analgrl trtan trta parcat2n parcat2 paramn param paramcd
avisitn avisit;
run;

proc means data=adqspa_chg alpha=0.05 noprint;
    var statval;
    by analgrln analgrl trtan trta parcat2n parcat2 paramn param paramcd
avisitn avisit;
    output out=results02_chg NMISS=MISS1 n=n1 mean=mean1 std=std1
median=median1 min=min1 max=max1 q1=q1 q3=q3 lclm=lci1 uclm=uci1; /* 1)
JMH 29Aug2014 */
run;

data results03_chg;
    set results02_chg;
    attrib meansd length=$20.
        minmax length=$20.
        n length=$20.
        median length=$20.
        ci length=$20.
        quart length=$20.;

    n = left(compress(put(n1,8.)));
    if not missing(median1) then median =
left(compress(put(round(median1,0.1),8.1)));
    if not missing(mean1) and not missing(std1) then meansd =
left(compress(put(round(mean1,0.1),8.1))) || ' (' ||
left(compress((put(0.01*ceil(std1/0.01),8.2)))) || ')';
    if not missing(min1) and not missing(max1) then minmax =
left(compress(put(min1,8.))) || ', ' || left(compress(put(max1,8.)));
    if not missing(lci1) and not missing(uci1) then ci =
strip(strip(compress(put(0.1*floor(lci1/0.1),8.1)))) || ', ' ||
strip(compress(put(0.1*ceil(uci1/0.1),8.1)));

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/*      if not missing(q1) and not missing(q3) then quart =
strip(strip(put(round(q1,0.1),8.1)) || ', ' ||
strip(put(round(q3,0.1),8.1))); */
      IF NOT MISSING(Q1) AND NOT MISSING(Q3) THEN QUART =
STRIP(PUT(0.1*FLOOR(Q1*10),10.1)) || ', ' ||
STRIP(PUT(0.1*CEIL(Q3*10),10.1));      /* 4) KB 22Sep2014 */

      drop n1 mean1 std1 median1 min1 max1 lci1 uci1 q1 q3;
run;

data results04_chg; /*Create text as required in output*/
  set results03_chg;
  attrib paramc length = $100.;

  if index(parcat2,'Factor')=0 then paramc=strip(param);
  else paramc=strip(parcat2);

  drop param paramcd parcat2 parcat2n;
run;

proc sort data=results04_chg;
  by paramn paramc avisitn avisit;
run;

proc transpose data=results04_chg out=results05_chg prefix=c
name=varname;
  by paramn paramc avisitn avisit;
  var n meansd median minmax ci quart;
  id trtan;
  idlabel trta;
run;
/*End of %Change values*/

/*Combine raw and change values*/
proc sort data=results05_orig; by paramn paramc avisitn avisit varname;
run;
proc sort data=results05_chg; by paramn paramc avisitn avisit varname;
run;

data results05;
  merge results05_orig results05_chg;
  by paramn paramc avisitn avisit varname;
run;

data results06;
  set results05;
  attrib stat length = $100.;

  if varname='N' then do;
    statord=1;
    stat='n';
  end;
  else if varname='MEANSD' then do;

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        statord=2;
        stat='Mean (SD)';
    end;
    else if varname='CI' then do;
        statord=3;
        stat='95% CI';
    end;
    else if varname='MEDIAN' then do;
        statord=4;
        stat='Median';
    end;
    else if varname='QUART' then do;
        statord=5;
        stat='Q25, Q75';
    end;
    else if varname='MINMAX' then do;
        statord=6;
        stat='Min, Max';
    end;

    drop varname;
run;

data results07;
    set results06;

    if stat='n' then do;
        if missing(o1) then o1='0';
        if missing(o2) then o2='0';
    end;

        if avisitn in(99 100) then do;
            c1='';
            c2='';
        end;
run;

data labels;
set results07;
    attrib o1 label = "Raw value"
           o2 label = "Raw value"
           c1 label = "% Change(*)"
           c2 label = "% Change(*)"
           avisit label= "Unformatted timepoint";

run;

proc sort data=labels;
    by paramn avisitn statord;
run;

proc sql noprint;

create table table.t_15_02_04_47 as
select paramc, avisit, stat, o1, c1, o2, c2

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from labels
order by paramn, avisitn, statord;

quit;

data paging;
  set labels;
  by paramn avisitn statord;

  flag=1;

  if ln gt 11 then ln=1; /*Amend to look presentable, and avoid page
overflows*/
  else ln+1;
  if ln=1 then page+1;
  call symput("page",compress(put(page,best.)));
run;

options number nodate orientation=landscape papersize=&p_pgsz missing='
';
ods escapechar='$';
%let linetop = \brdrt\brdrs\brdrw30; * needs to be 1.5pt so calculated
in twips (1/20 pt) ;
%let linebot = \brdrb\brdrs\brdrw30;
%macro outrtf(blankn=, halfblnk=);

%if &halfblnk=N %then %let halfblnk=;
%else %if &halfblnk=Y %then %let halfblnk=\~;

ods path stdlib.tl06324 (read) ;
ods results off;
ods rtf toc_data
file="/cvn/projects/prj/data/000000106324/TFL/&TFL_Part./&tflno..rtf"
style=tl06324 startpage=yes headery=1440 footery=1440 ;
ods noproctitle;
%do i=1 %to &page;

title ;
footnote;
%let wd=0;
ods proclabel=' ';

data comp;
  set paging end=eof;
  where page=&i;

  /* Amend title as needed */
  _firtitl="Table 15.2.4.47 Descriptive Statistics of MCEQ
Questionnaire Subscales - FAS";

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    _upcas=(length("Path: &TFLpath.")-
length(compress("Path:&TFLpath.",'ABCDEFGHIJKLMNOPQRSTUVWXYZ')))/2;
    len=&blankn.-length("(page &i of &page)");
    if eof then do;
    call symput('_FSRTITL', trim(left(_firtitl)));
    call symput('_blankn', compress(put(len,best.)));
    end;
    drop _firtitl _upcas len;
run;

ods listing close;

* most set up in template others below;
* title arial 12pt bold with 12pt paragraph space below;
* all headers to be arial 11pt bold;
* data arial 10pt;
* headers to be central, text values left aligned and numeric centered
around decimal point;
proc report data = comp missing headline headskip missing nowd split =
'$' %if &i=1 %then %do; contents=' ' %end; %else %do; contents='' %end;;
;
    column flag page paramn paramc avisitn avisit statord stat ("THS
2.2$(N=&trt1)&linebot" o1 c1) ("CC$(N=&trt2)&linebot" o2 c2);

    define flag          / order order=internal noprint;
    define page          / order order = internal noprint;
    define paramn        / order order = internal noprint;
    define paramc        / group style={just=left cellwidth=1.8cm}
style(header)={just=center} "Variable";
    define avisitn       / order order=internal noprint;
    define avisit        / group style={just=left cellwidth=1.6cm}
style(header)={just=center} "Timepoint";
    define statord       / order order = internal noprint;
    define stat          / display style={just=left cellwidth=1.5cm}
style(header)={just=center} "Statistic";
    define o1            / display style={just=c cellwidth=2cm}
style(header)={just=center};
    define c1            / display style={just=c cellwidth=2cm}
style(header)={just=center};
    define o2            / display style={just=c cellwidth=2cm}
style(header)={just=center};
    define c2            / display style={just=c cellwidth=2cm}
style(header)={just=center};

    break before flag / page %if &i=1 %then %do;
    contents="&_fsrtitl" %end; %else %do; contents='' %end;;

    break after page / page;

    compute after avisitn;
        line " ";
    endcomp;

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compute before page / style={protectspecialchars=off};
  line "&linetop";
endcomp;

compute before _page_ / style={just=left protectspecialchars=off};
  line "\b\fs24\sa24&_FSRTITL." ; * \b = bold, \fs24 is font
size 12pt, \sa24 is space after 12pt;
  line "&linebot";
endcomp;

compute after _page_/ style={just=left protectspecialchars=off
pretext="&linetop."};
  line 'Note: CC = Conventional cigarettes; SA = Smoking
abstinence; THS = Tobacco Heating System.';
  line "Note: * % change from baseline, where baseline is the
last assessment prior to first product use in CC/THS 2.2 arms on Day 1 or
last assessment prior to 06:29 AM in SA arm on Day 1."; /* 2) JR
18Sep2014 */
/*      line "Note: * % change from baseline, where baseline is
defined as the last assessment prior to 06:29 AM on Day 1.";*/
  line ' ';
  line 'Appendix 15.3.6.13';
  line "Path: &TFLpath." &_blankn.*"\~\~" "(Page &i of &page)";
  line "Program Run: &sysdate &sysuserid Program Status:
&status";
endcomp;
run;
%end;
ods rtf close;
ods results on;
ods path sashelp.tmplmst (read);

%mend ;

%outrtf(blankn=70, halfblnk=N);

ods listing;
proc printto print = "&table./t_15_02_04_47.lst" new;
run;

proc contents data = table.t_15_02_04_47 varnum;
run;
ods listing close;

proc printto ; run;
*=====;
* END OF PROGRAM CODE ;
*=====;

```