

```

%_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_hstqu.sas;
%put NOTE: Purpose              : table decriptive stats of HST
questionnaire data ;
%put NOTE: ;
%put NOTE: Input Data           : ADAM.ADQSPA ADAM.ADSL;
%put NOTE: Output               : t_15_2_4_60(hst);
%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: 05Aug2014   JMH       1) Amended footnotes;
%put NOTE: 05Aug2014   JMH       2) Amended null counts to zero;
%put NOTE: 05Aug2014   JMH       3) Added ANL01FL to where statement;
%put NOTE: 05Aug2014   JMH       4) Amended spelling to remove wa-rning
in lof;
%put NOTE: 15Sep2014   JR        5) Amended table header;
%put NOTE: 22Sep2014   KB        6) Checked for if missing category is
needed;
%put NOTE: 22Sep2014   KB        7) Added full stop to footnote;
%put NOTE: 01Oct2014   JMH       8) Amended order of output as per
client comments;
%put NOTE: 01Oct2014   JMH       9) Removed formatting for dual
programming dataset;
%put NOTE: ;
%put NOTE:
=====;
options notes source source2 nofullstimer validvarname=upcase missing='
';
ods _all_ close;
ods listing;

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

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%let tflno=T_15_02_04_60(hst);

%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",""));
run;

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

/*Use ADSL to get N values for column headers*/
data adsl;
    set adam.adsl(where=(fasfl='Y' and trt01a ne 'SA'));
run;

proc sort data=adsl nodupkey out=adsl1;
    by trt01an trt01a subjid;
run;

proc freq data=adsl1(where=(not missing(trt01an))) noprint;
    table trt01an*trt01a/ out =tot(drop=percent rename=(count=total));
run;

data tot2;
    set tot;
    trtan=trt01an;
    trta=trt01a;
    call symput('trt' || compress(put(trt01an,best.)),
compress(total));
    drop trt01an trt01a;
run;

/*Bring in appropriate data from ADQSPA*/
data adqsl;
    set adam.adqspa(where=(ANL01FL='Y' AND avisit in('Day 0' 'Day 4')
and fasfl ='Y' and parcat1 in ('Human Smoking Topography
Questionnaire'))); /* 3) JMH 05Aug2014 */
    if trta='SA' then delete;
run;

proc sort data=adqsl; by trtan trta; run;

data adqs;
    set adqsl;
    by trtan trta;
    output;
    if first.trtan then do;
        subjid='';
        avalc='';
        output;
    end;

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        end;
run;

* Create values for table rows;
data questions;
    set adqs;
    length rowtext $200;
    * Question 1 - header;
    roworder1 = 1;
    roworder2 = 1;
    rowtext = 'The smoking of the CC/Products differs with the device';
    output;
    * Question 1 - responses - Strongly agree;
    roworder1 = 1;
    roworder2 = 2;
    rowtext = '$S={foreground=white} . $S={} Strongly agree';
    if subjid = . or (paramcd='HSSMOK' and aval=5) then output;
    * Question 1 - responses - Agree;
    roworder1 = 1;
    roworder2 = 3;
    rowtext = '$S={foreground=white} . $S={} Agree';
    if subjid = . or (paramcd='HSSMOK' and aval=4) then output;
    * Question 1 - responses - Neither agree nor disagree;
    roworder1 = 1;
    roworder2 = 4;
    rowtext = '$S={foreground=white} . $S={} Neither agree nor
disagree';
    if subjid = . or (paramcd='HSSMOK' and aval=3) then output;
    * Question 1 - responses - Disagree;
    roworder1 = 1;
    roworder2 = 5;
    rowtext = '$S={foreground=white} . $S={} Disagree';
    if subjid = . or (paramcd='HSSMOK' and aval=2) then output;
    * Question 1 - responses - Strongly disagree;
    roworder1 = 1;
    roworder2 = 6;
    rowtext = '$S={foreground=white} . $S={} Strongly disagree';
    if subjid = . or (paramcd='HSSMOK' and aval=1) then output;
    * Question 2 - header;
    roworder1 = 2;
    roworder2 = 1;
    rowtext = 'You enjoy smoking with the device as much as without it';
    output;
    * Question 2 - responses - Strongly agree;
    roworder1 = 2;
    roworder2 = 2;
    rowtext = '$S={foreground=white} . $S={} Strongly agree';
    if subjid = . or (paramcd='HSENJ' and aval=5) then output;
    * Question 2 - responses - Agree;
    roworder1 = 2;
    roworder2 = 3;
    rowtext = '$S={foreground=white} . $S={} Agree';
    if subjid = . or (paramcd='HSENJ' and aval=4) then output;
    * Question 2 - responses - Neither agree nor disagree;

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roworder1 = 2;
roworder2 = 4;
    rowtext = '$S={foreground=white} . $S={} Neither agree nor
disagree';
    if subjid = . or (paramcd='HSENJ' and aval=3) then output;
    * Question 2 - responses - Disagree;
    roworder1 = 2;
    roworder2 = 5;
        rowtext = '$S={foreground=white} . $S={} Disagree';
    if subjid = . or (paramcd='HSENJ' and aval=2) then output;
    * Question 2 - responses - Stronly disagree;
    roworder1 = 2;
    roworder2 = 6;
        rowtext = '$S={foreground=white} . $S={} Strongly disagree';
    if subjid = . or (paramcd='HSENJ' and aval=1) then output;
    * Question 3 - header;
    roworder1 = 3;
    roworder2 = 1;
    rowtext = 'The taste of the CC /products is different with the
device';
        output;
    * Question 3 - responses - Strongly agree;
    roworder1 = 3;
    roworder2 = 2;
        rowtext = '$S={foreground=white} . $S={} Strongly agree';
    if subjid = . or (paramcd='HSTASTE' and aval=5) then output;
    * Question 3 - responses - Agree;
    roworder1 = 3;
    roworder2 = 3;
        rowtext = '$S={foreground=white} . $S={} Agree';
    if subjid = . or (paramcd='HSTASTE' and aval=4) then output;
    * Question 3 - responses - Neither agree nor disagree;
    roworder1 = 3;
    roworder2 = 4;
        rowtext = '$S={foreground=white} . $S={} Neither agree nor
disagree';
    if subjid = . or (paramcd='HSTASTE' and aval=3) then output;
    * Question 3 - responses - Disagree;
    roworder1 = 3;
    roworder2 = 5;
        rowtext = '$S={foreground=white} . $S={} Disagree';
    if subjid = . or (paramcd='HSTASTE' and aval=2) then output;
    * Question 3 - responses - Stronly disagree;
    roworder1 = 3;
    roworder2 = 6;
        rowtext = '$S={foreground=white} . $S={} Strongly disagree';
    if subjid = . or (paramcd='HSTASTE' and aval=1) then output;
    * Question 4 - header;
    roworder1 = 4;
    roworder2 = 1;
    rowtext = 'The device is easy to use';
        output;
    * Question 4 - responses - Strongly agree;
    roworder1 = 4;

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roworder2 = 2;
    rowtext = '$S={foreground=white} . $S={} Strongly agree';
if subjid = . or (paramcd='HSEASY' and aval=5) then output;
* Question 4 - responses - Agree;
roworder1 = 4;
roworder2 = 3;
    rowtext = '$S={foreground=white} . $S={} Agree';
if subjid = . or (paramcd='HSEASY' and aval=4) then output;
* Question 4 - responses - Neither agree nor disagree;
roworder1 = 4;
roworder2 = 4;
    rowtext = '$S={foreground=white} . $S={} Neither agree nor
disagree';
if subjid = . or (paramcd='HSEASY' and aval=3) then output;
* Question 4 - responses - Disagree;
roworder1 = 4;
roworder2 = 5;
    rowtext = '$S={foreground=white} . $S={} Disagree';
if subjid = . or (paramcd='HSEASY' and aval=2) then output;
* Question 4 - responses - Strongly disagree;
roworder1 = 4;
roworder2 = 6;
    rowtext = '$S={foreground=white} . $S={} Strongly disagree';
if subjid = . or (paramcd='HSEASY' and aval=1) then output;
* Question 5 - header;
roworder1 = 5;
roworder2 = 1;
rowtext = 'Your smoking is disturbed by the device';
    output;
* Question 5 - responses - Strongly agree;
roworder1 = 5;
roworder2 = 2;
    rowtext = '$S={foreground=white} . $S={} Strongly agree';
if subjid = . or (paramcd='HSDISTU' and aval=5) then output;
* Question 5 - responses - Agree;
roworder1 = 5;
roworder2 = 3;
    rowtext = '$S={foreground=white} . $S={} Agree';
if subjid = . or (paramcd='HSDISTU' and aval=4) then output;
* Question 5 - responses - Neither agree nor disagree;
roworder1 = 5;
roworder2 = 4;
    rowtext = '$S={foreground=white} . $S={} Neither agree nor
disagree';
if subjid = . or (paramcd='HSDISTU' and aval=3) then output;
* Question 5 - responses - Disagree;
roworder1 = 5;
roworder2 = 5;
    rowtext = '$S={foreground=white} . $S={} Disagree';
if subjid = . or (paramcd='HSDISTU' and aval=2) then output;
* Question 5 - responses - Strongly disagree;
roworder1 = 5;
roworder2 = 6;
    rowtext = '$S={foreground=white} . $S={} Strongly disagree';

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    if subjid = . or (paramcd='HSDISTU' and aval=1) then output;
run;

proc sql;
    create table results02 as
        select trtan, trta, roworder1, roworder2, rowtext, avisitn, avisit,
        subjid, count(distinct subjid) as subjects
        from questions
        group by trtan, trta, roworder1, roworder2, rowtext, avisitn, avisit;
quit;

/* 6) START KB 22Sep2014 */
PROC SQL;
    CREATE TABLE RESULTS02A AS
        SELECT TRTAN, TRTA, ROWORDER1, ROWORDER2, ROWTEXT, AVISITN, AVISIT,
        SUBJID, NMISS(AVAL) AS SUBJECTS2
        FROM QUESTIONS(WHERE=(SUBJID NE ''))
        GROUP BY TRTAN, TRTA, ROWORDER1, ROWORDER2, ROWTEXT, AVISITN, AVISIT;
QUIT;
/* 6) END KB 22Sep2014 */

proc sql;
    create table results03 as
        select *
        from (select distinct trtan, trta, roworder1, roworder2, rowtext,
        avisitn, avisit, subjects from results02);
quit;

/* 6) START KB 22Sep2014 */
PROC SQL; /*CHECK WHETHER THIS DATASET CONTAINS > 0 RESULTS FOR
SUBJECTS2, IF IT DOES THEN A MISSING ROW NEEDS CREATING*/
    CREATE TABLE RESULTS03A AS
        SELECT *
        FROM (SELECT DISTINCT TRTAN, TRTA, ROWORDER1, ROWORDER2, ROWTEXT,
        AVISITN, AVISIT, SUBJECTS2 FROM RESULTS02A);
QUIT;
/* 6) END KB 22Sep2014 */

data results04;
    merge results03 tot2;
    by trtan trta;
run;

data results05;
    set results04;
    attrib percentc subjectsc length=$200.;

    percent=subjects/total*100;

    if roworder2=1 then do;
        subjects=.;
        total=.;
        percent=.;
    end;

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end;

if missing(percent) or percent=0 then percentc='';
else if percent=100 then percentc='(100 %)';
else if percent ge 10 then percentc='(
||compress(put(percent,8.1))||'%)';
else if percent lt 10 then percentc='(
||compress(put(percent,8.1))||'%)';

subjectsc=left(strip(put(subjects,best.)));
drop total percent subjects;
run;
/*Transposing the subjects and percentages separate will make it easier
to align columns by DP as per style guide*/

proc sort data=results05;
by roworder1 roworder2 rowtext avisitn avisit;
run;

/*Transpose to get subjects*/
proc transpose data=results05 out=tsubs prefix=n;
by roworder1 roworder2 rowtext avisitn avisit;
id trtan;
idlabel trta;
var subjectsc;
run;

/*Transpose to get percentages*/
proc transpose data=results05 out=tperc prefix=p;
by roworder1 roworder2 rowtext avisitn avisit;
id trtan;
idlabel trta;
var percentc;
run;

/*Now merge the subjects and percetages back together*/
data results06;
merge tsubs tperc;
by roworder1 roworder2 rowtext avisitn avisit;
if avisit='Day 4' then roworder1+10; /*This is to show all Day 4
after all Day 0*/

/*if roworder2 ne 1 then avisit='';*/*Visit only needs displaying
at the question point*/ /* 8) JMH 01Oct2014 */

/* if length(strip(n1))=1 then n1=' ' || n1;*/ /* 9) JMH 01Oct2014
*/
/* if length(strip(n2))=1 then n2=' ' || n2;*/ /* 9) JMH 01Oct2014
*/

/* 2) start JMH 05Aug2014 */
IF ROWORDER2 NE 1 /*TRHEN*/THEN DO; /* 4) JMH 05Aug2014 */

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                IF MISSING(N1) THEN N1='0';
                IF MISSING(N2) THEN N2='0';
            END;
/* 2) end JMH 05Aug2014 */
run;

data labels;
set results06;
    attrib n1 label = "n"
           n2 label = "n"
           p1 label = "%"
           p2 label = "%";
           flag=1;
run;

proc sql noprint;
    create table table.T_15_02_04_60 as
    select rowtext, avisit, n1, p1, n2, p2
    from labels
    order by AVISITN, roworder1, roworder2/*, avisitn*/; /* 8) JMH
01Oct2014 */
quit;

proc sort data=labels;
    by AVISITN roworder1 roworder2 /*avisitn*/; /* 8) JMH 01Oct2014 */
run;

%macro outrtf(blankn=, halfblnk=);

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

data paging;
    set labels;
    by AVISITN roworder1 roworder2 /*avisitn*/; /* 8) JMH 01Oct2014
*/
    /*if roworder1 in(3 5 11 13 15) and roworder2=1then ln=1;*/ /*Amend
to look presentable, and avoid page overflows*/
    IF FIRST.ROWORDER1 AND LN GT 8 THEN LN=1; /* 8) JMH 01Oct2014
*/
    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;

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ods path stdlib.t106324 (read) ;
ods results off;
ods rtf toc_data
file="/cvn/projects/prj/data/000000106324/TFL/&TFL_Part../&tflno..rtf"
style=t106324 startpage=yes headery=1440 footery=1440 ;
ods noproctitle;

%do i=1 %to &page;

title ;
footnote;
%let wd=0;

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

    /* Amend title as needed */
    _firtitl="Table 15.2.4.60 Descriptive Statistics of HST Questionnaire
Data - FAS";
    _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 proclabel = ' ';
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 =
'$' %if &i=1 %then %do; contents=' ' %end; %else %do; contents='' %end;;;
    column flag page AVISITN ("Timepoint" AVISIT) roworder1 roworder2
/*avisitn*/ (/*"Question$Response"*/"Questionnaire$items" rowtext)
/*("Timepoint" avisit)*/ ("THS 2.2$(N=&trt1)$n
(%) " n1 p1) ("CC$(N=&trt2)$n (%) " n2 p2); /* 5) JR 15Sep2014 */

    define flag          / order order = internal noprint;
    define page          / order order = internal noprint;
    DEFINE AVISITN       / ORDER ORDER = INTERNAL NOPRINT; /* 8) JMH
01Oct2014 */

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        define roworder1      / order order=internal noprint;
        define roworder2      / order order=internal noprint;
/*      define avisitn        / order order = internal noprint;*/
        DEFINE AVISIT          / GROUP STYLE={JUST=LEFT CELLWIDTH=1CM}
STYLE(HEADER)={JUST=L} ""; /* 8) JMH 01Oct2014 */
        define rowtext        / group style={just=left cellwidth=6cm}
style(header)={just=center} " ";
/*      define avisit          / group style={just=left cellwidth=1cm}
style(header)={just=l} "";*/
        define n1              / display style={just=d cellwidth=0.5cm}
style(header)={just=r}"";
        define p1              / display style={just=c cellwidth=1cm}
style(header)={just=r}"";
        define n2              / display style={just=d cellwidth=0.5cm}
style(header)={just=r}"";
        define p2              / display style={just=c cellwidth=1cm}
style(header)={just=r} "";

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

        break after page / page;

        compute after roworder1;
                line " ";
        endcomp;

        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: CC = Conventional cigarettes; THS = Tobacco
Heating System.'; /* 1) JMH 05Aug2014 */
/*                line 'Note: Percentages are based on the number of subjects
indicated in the column header (N)';*/
                LINE 'Note: Percentages are based on the number of subjects
indicated in the column header (N).'; /* 7) KB 22Sep2014 */
                line ' ';
/*                line 'Appendix 15.3.7.3';*/
                line 'Appendix 15.3.7.2'; /* 1) JMH 05Aug2014 */
                line "Path: &TFLpath." &_blankn.*"\~\~" "(Page &i of &page)";
                line "Program Run: &sysdate &sysuserid Program Status:
&status";
        endcomp;

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```

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_60.lst" new;
run;

proc contents data = table.T_15_02_04_60 varnum;
run;
ods listing close;
proc printto ; run;
*=====;
* END OF PROGRAM CODE ;
*=====;

```