

/*=====

*Covance Study ID : 000000106343

*Program Name : t_avg_prduse_cat_fas.sas

*Purpose : Summary of Average Daily Product Use by Product Use Category in Ambulatory Period
- FAS

Table 15.2.2.5.1

*Input Data : adam.adex

*Output Data : tflds.T_15_02_02_05_01

*Macros Called : %m_printto, %m_logchk, %mmeans, %outrtf

*Programmed by : L.Ma

*Creation Date : 2015-05-28

*=====

*Modification History

*Date Initials No. Reason;

=====/

options notes nosource;

proc datasets lib=work nolist memtype=data kill; quit;

options notes source source2 nofullstimer validvarname=upcase missing=' ';

ods _all_ close;

ods listing;

%m_printto;

*****,

* Part 1: Product Use Category with Overall part

*****,

*** as per email dated 06Aug2015 from John: Please add (N=xx) in the last column header for the Overall THSm2.2, mCC and SA arms based on the FAS population counts. ***;

/*Use ADSL to get N values for column headers on the rtf report.*/

data adsl;

set adam.adsl(where=(fasfl='Y'));

if trt01pn=4 then trt=1;

else if trt01pn=5 then trt=2;

else if trt01pn=3 then trt=3;

run;

proc freq data=adsl noprint;

table trt/ out =tot(drop=percent rename=(count=total));

run;

data tot2;

set tot;

call symput('trt' || compress(put(trt,best.)), compress(put(total, best.)));

run;

*macro for the average daily product use (of GPUCAT) for periods per mockup;

%macro mmeans(APUPERC=, GPUCAT=, out=);

%if &GPUCAT.=GPUCAT5 %then %do;

/*for the average daily product use over the entire ambulatory period */

data dsn;

*only summarize AVAL >= 0 (do not summarize AVAL=missing). per JH email on Thu 7/2/2015 2:57 PM;

set adam.adex(where=(aval not in (.) and fasfl ='Y' and parcat3='AVERAGE DAILY PRODUCT USE IN AMBULATORY' and PARAMCD like 'AD%'));

if trtan=4 then trt=1;

else if trtan=5 then trt=2;

else if trtan=3 then trt=3;

if &GPUCAT.='THS 2.2' then do; order2=1; order3=0; output; end;

else if &GPUCAT.='Dual' then do; order2=2; order3=0; output; end;

else if &GPUCAT.='CC' then do; order2=3; order3=0; output; end;

else if &GPUCAT.='Not Abstinent' then do; order2=4; order3=0; output;
end;

else if &GPUCAT.='Predominantly Abstinent' then do; order2=5; order3=0; output; end;

else if &GPUCAT.='Abstinent' then do; order2=6; order3=0; output; end;

if order2 in (1 2 3 4 5 6) then do; order2=7; order3=0; output; end;

run;

%end;

%else %do;

*for the average daily product use by period;

data dsn;

*as per email dated Thu 7/2/2015 2:57 PM from John, only summarize AVAL >= 0 (do not summarize AVAL=missing). ;

```
set adam.adex(where=(fasfl='Y' and aval not in (.) and parcat3='AVERAGE DAILY PRODUCT USE  
BY PERIOD' and PARAMCD like 'PD%' and APUPERC=&APUPERC. ));
```

```
if trtan=4 then trt=1;

else if trtan=5 then trt=2;

else if trtan=3 then trt=3;


if &GPUCAT.='THS 2.2' then do; order2=1; order3=0; output; end;

else if &GPUCAT.='Dual' then do; order2=2; order3=0; output; end;

else if &GPUCAT.='CC' then do; order2=3; order3=0; output; end;

else if &GPUCAT.='Not Abstinent' then do; order2=4; order3=0; output;
end;

else if &GPUCAT.='Predominantly Abstinent' then do; order2=5; order3=0; output; end;

else if &GPUCAT.='Abstinent' then do; order2=6; order3=0; output; end;

if order2 in (1 2 3 4 5 6) then do; order2=7; order3=0; output; end;

run;

%end;

proc freq data=dsn;

tables order2/nocum nopercnt;

run;


proc means data=dsn noprint nway;

var aval;

class trt order3 PARAMCD order2;

output out=results01 n=n1 mean=mean1 std=std1 median=median1 min=min1 max=max1 lclm=lci1
uclm=uci1;

run;
```

```
data results02;
```

```
set results01;
```

```
attrib meansd length=$20.
```

```
minmax length=$20.
```

```
n length=$20.
```

```
median length=$20.
```

```
aci length=$20.;
```

*when counts <4 part: as per email dated 06Aug2015 11:22 AM from John: they would like to see the actual n on that row and then have NC for the rest of the statistics;

```
if n1<4 then do;
```

```
n=left(compress(put(n1,8.))); median='NC'; meansd='NC'; minmax='NC'; aci='NC';
```

```
end;
```

```
else do;
```

```
n = left(compress(put(n1,8.)));
```

```
if not missing(median1) then median = left(compress(put(round(median1,0.01),8.2)));
```

```
if not missing(mean1) and not missing(std1) then meansd =  
left(compress(put(round(mean1,0.01),8.2))) || ' (' || left(compress(put(0.001*ceil(std1/0.001),8.3))) ||  
)';
```

```
else if mean1=. and not missing(std1) then meansd = 'NC (' ||  
left(compress(put(0.001*ceil(std1/0.001),8.3))) || ')';
```

```
else if std1=. and not missing(mean1) then meansd =  
left(compress(put(round(mean1,0.01),8.2))) || ' (NC' || ')';
```

```
else if mean1=. and std1=. then meansd = 'NC (' || 'NC' || ')';
```

```
if not missing(min1) and not missing(max1) then minmax =  
left(compress(put(min1,8.1))) || ', ' || left(compress(put(max1,8.1)));
```

```

        if not missing(lci1) and not missing(uci1) then aci = strip(put(0.01*floor(lci1/0.01),8.2)) || ' ', '
|| strip(put(0.01*ceil(uci1/0.01),8.2));

        else if lci1=. and not missing(uci1) then aci = 'NC, ' ||
strip(put(0.01*ceil(uci1/0.01),8.2));

        else if uci1=. and not missing(lci1) then aci = strip(put(0.01*floor(lci1/0.01),8.2)) || ' ', '
|| 'NC';

        else if lci1=. and uci1=. then aci = 'NC, ' || 'NC' ;

        end;

*format blank cell per JH email on Thu 7/2/2015 2:57 PM;

if n = " " then n = "0";

drop n1 mean1 std1 median1 min1 max1 uci1 lci1 ;

run;

proc transpose data=results02 out=results03 prefix=_ name=varname;

    by trt order3 PARAMCD ;

    var n meansd median minmax aci ;

    id order2;

run;

data results04;

    retain PARAMCD product period stat _1 _2 _3 _4 _5 _6 _7 trt;

    set results03;

    length stat period product $50;

    if upcase(varname)='N'          then do; statord=1; stat='n'; end;

    if upcase(varname)='MEDIAN' then do; statord=4; stat='Median'; end;

    if upcase(varname)='MINMAX' then do; statord=5; stat='Min, Max'; end;

```

```
if upcase(varname)='MEANS'D then do; statord=2; stat='Mean (SD)'; end;
```

```
if upcase(varname)='ACI' then do; statord=3; stat='95% CI'; end;
```

```
period=&APUPERC.;
```

```
*convert paramcd to product name;
```

```
if paramcd = "PDTHS2_2" or paramcd = "ADTHS2_2" then product = "THSm2.2";
```

```
if paramcd = "PDMCC" or paramcd = "ADMCC" then product = "mCC/CC";
```

```
if paramcd = "PDCHWMKL" or paramcd = "ADCHWMKL" then product = "Chew/Smokeless Tob."
```

```
;
```

```
if paramcd = "PDCIGARS" or paramcd = "ADCIGARS" then product = "Cigar/Cigarillo";
```

```
if paramcd = "PDE_CIG" or paramcd = "ADE_CIG" then product = "E-Cigarette";
```

```
if paramcd = "PDGUMS" or paramcd = "ADGUMS" then product = "Gums";
```

```
if paramcd = "PDINHAL" or paramcd = "ADINHAL" then product = "Inhaler";
```

```
if paramcd = "PDLOZENG" or paramcd = "ADLOZENG" then product = "Lozenges";
```

```
if paramcd = "PDNASPR" or paramcd = "ADNASPR" then product = "Nasal Spray";
```

```
if paramcd = "PDOTHNRT" or paramcd = "ADOTHNRT" then product = "Other NRT";
```

```
if paramcd = "PDPATCHE" or paramcd = "ADPATCHE" then product = "Patches";
```

```
if paramcd = "PDPIPE" or paramcd = "ADPIPE" then product = "Pipes";
```

```
if paramcd = "PDOTHTOB" or paramcd = "ADOTHTOB" then product = "Tob. Not Listed";
```

```
*format empty cell to 0 per JH email on 02Jul2015 2:59 PM;
```

```
array cat{7} $20. _1 _2 _3 _4 _5 _6 _7;
```

```
do i=1 to 7;
```

```
    if upcase(varname)='N' and cat{i}="" then cat{i}='0';
```

```
end;
```

```
drop varname paramcd;
```

```
run;
```

```
proc sort data=results04 out=&out.;
```

```
by trt order3 product period statord;
```

```
run;
```

```
%mend mmeans;
```

```
%mmeans(APUPERC='Period 2', GPUCAT=GPUCAT2, out=op2);
```

```
%mmeans(APUPERC='Period 3', GPUCAT=GPUCAT3, out=op3);
```

```
%mmeans(APUPERC='Period 4', GPUCAT=GPUCAT4, out=op4);
```

```
%mmeans(APUPERC='Entire Ambulatory Period', GPUCAT=GPUCAT5, out=op5);
```

```
*set together per mock;
```

```
data fin1;
```

```
set op2 op3 op4 op5;
```

```
run;
```

```
data final1;
```

```
retain product period stat _1 _2 _3 _4 _5 _6 _7 statord prd perd order3;
```

```
set fin1(where=(trt=1));
```

```
*order product name;
```

```
if product="THSm2.2" then do; prd = 1; end ;
```

```
if product="mCC/CC" then do; prd = 2; end ;
```

```
if product="Chew/Smokeless Tob." then do; prd = 3; end ;
```



```

if product="Cigar/Cigarillo" then do; prd = 4; end ;

if product="E-Cigarette" then do; prd = 5; end ;

if product="Gums" then do; prd = 6; end ;

if product="Inhaler" then do; prd = 7; end ;

if product="Lozenges" then do; prd = 8; end ;

if product="Nasal Spray" then do; prd = 9; end ;

if product="Other NRT" then do; prd = 10; end ;

if product="Patches" then do; prd = 11; end ;

if product="Pipes" then do; prd = 12; end ;

if product="Tob. Not Listed" then do; prd = 13; end ;


*period order;

if period="Period 2" then perd=2;

if period="Period 3" then perd=3;

if period="Period 4" then perd=4;

if period="Entire Ambulatory Period" then perd=5;

run;


proc sort data=final1;

    by trt order3 prd perd statord;

run;


*****
* Part 2: Product Use Category with Total part per mockup
*****

```

```

%macro mmeans(APUPERC=, GPUCAT=, PUCAT=, pucat_ex=, out=);

%if &GPUCAT.=GPUCAT5 %then %do;

*for the average daily product use over the entire ambulatory period;

data dsn;

    *only summarize AVAL >= 0 (do not summarize AVAL=missing). per JH email on Thu 7/2/2015
    2:57 PM;

    set adam.adex(where=(aval not in (.) and fasfl ='Y' and parcat3='AVERAGE DAILY PRODUCT USE
    IN AMBULATORY' and PARAMCD like 'AD%' ));

    if          trtan=4 then trt=1;

    else if trtan=5 then trt=2;

    else if trtan=3 then trt=3;


    if          &GPUCAT.='THS 2.2' and &PUCAT.='Primarily THS 2.2'
                then do; order2=1; order3=1; output; end;

    else if &GPUCAT.='THS 2.2' and &PUCAT.='Predominantly THS 2.2'
                then do; order2=3; order3=1; output; end;

    if order2 in (1 3)
                                then do; order2=4; order3=1;
output; end;

    if          &GPUCAT.='THS 2.2' and &PUCAT.='Primarily THS 2.2' and
    &pucat_ex.='Exclusively THS 2.2' then do; order2=2; order3=1; &PUCAT.='Exclusively THS 2.2'; output;
    end;


    if    &GPUCAT.='Dual' and &PUCAT.='Dual Mostly THS 2.2' then do; order2=1; order3=2; output;
end;

    else if &GPUCAT.='Dual' and &PUCAT.='Dual Balanced'    then do; order2=2; order3=2; output;
end;

```

```

        else if &GPUCAT.='Dual' and &PUCAT.='Dual Mostly CC' then do; order2=3; order3=2; output;
end;

        if order2 in (1 2 3) then
do; order2=4; order3=2; output; end;

        if &GPUCAT.='CC' and &PUCAT.='Predominantly CC'
        then do; order2=1; order3=3; output; end;

        else if &GPUCAT.='CC' and &PUCAT.='Primarily CC'
        then do; order2=2; order3=3; output; end;

        if &GPUCAT.='CC' and &PUCAT.='Exclusively CC' and &pucat_ex.='Exclusively CC'
then do; order2=3; order3=3; output; end;

        if order2 in (1 2 )
        then do; order2=4; order3=3; output; end;

        if &GPUCAT.='CC' and &PUCAT.='CC Only' then do; order2=1; order3=4; output;
end;

        else if &GPUCAT.='CC' and &PUCAT.='CC Dual' then do; order2=2; order3=4; output; end;

        if order2 in (1 2) then do; order2=4; order3=4;
output; end;

        if &GPUCAT.='Abstinent' and &PUCAT.='Abstinent'
        then do; order2=1; order3=5; output; end;

        else if &GPUCAT.='Not Abstinent' and &PUCAT.='Not Abstinent'
then do; order2=3; order3=5; output; end;

        else if &GPUCAT.='Predominantly Abstinent' and &PUCAT.='Predominantly Abstinent' then do;
order2=2; order3=5; output; end;

        if order2 in (1 2 3) then do;
order2=4; order3=5; output; end;

run;

%end;

```

%else %do;

*for the average daily product use by period;

data dsn;

*only summarize AVAL >= 0 (do not summarize AVAL=missing). per JH email on Thu 7/2/2015 2:57 PM;

set adam.adex(where=(aval not in (.) and fasfl ='Y' and parcat3='AVERAGE DAILY PRODUCT USE BY PERIOD' and PARAMCD like 'PD%' and APUPERC=&APUPERC.));

if trtan=4 then trt=1;

else if trtan=5 then trt=2;

else if trtan=3 then trt=3;

if &GPUCAT.='THS 2.2' and &PUCAT.='Primarily THS 2.2'
then do; order2=1; order3=1; output; end;

else if &GPUCAT.='THS 2.2' and &PUCAT.='Predominantly THS 2.2'
then do; order2=3; order3=1; output; end;

if order2 in (1 3)
then do; order2=4; order3=1;

output; end;

if &GPUCAT.='THS 2.2' and &PUCAT.='Primarily THS 2.2' and
&pucut_ex.='Exclusively THS 2.2' then do; order2=2; order3=1; &PUCAT.='Exclusively THS 2.2'; output;
end;

if &GPUCAT.='Dual' and &PUCAT.='Dual Mostly THS 2.2' then do; order2=1; order3=2; output;
end;

else if &GPUCAT.='Dual' and &PUCAT.='Dual Balanced' then do; order2=2; order3=2; output;
end;

else if &GPUCAT.='Dual' and &PUCAT.='Dual Mostly CC' then do; order2=3; order3=2; output;
end;

if order2 in (1 2 3) then
do; order2=4; order3=2; output; end;

```

        if                &GPUCAT.='CC' and &PUCAT.='Primarily CC' and &pucat_ex.='Exclusively CC'
then do; order2=3; order3=3; output; end;

        if                &GPUCAT.='CC' and &PUCAT.='Predominantly CC'
        then do; order2=1; order3=3; output; end;

        else if &GPUCAT.='CC' and &PUCAT.='Primarily CC'
                then do; order2=2; order3=3; output; end;

        if order2 in (1 2 )
                                then do; order2=4; order3=3; output; end;

        if                &GPUCAT.='CC' and &PUCAT.='CC Only' then do; order2=1; order3=4; output;
end;

        else if &GPUCAT.='CC' and &PUCAT.='CC Dual' then do; order2=2; order3=4; output; end;

        if order2 in (1 2)                                then do; order2=4; order3=4;
output; end;

        if                &GPUCAT.='Abstinent' and &PUCAT.='Abstinent'
                then do; order2=1; order3=5; output; end;

        else if &GPUCAT.='Not Abstinent' and &PUCAT.='Not Abstinent'                                then
do; order2=3; order3=5; output; end;

        else if &GPUCAT.='Predominantly Abstinent' and &PUCAT.='Predominantly Abstinent' then do;
order2=2; order3=5; output; end;

        if order2 in (1 2 3)
                                then do; order2=4; order3=5; output; end;

run;

%end;

proc means data=dsn noprint nway;

    var aval;

    class trt order3 PARAMCD order2;

```

```
output out=results01 n=n1 mean=mean1 std=std1 median=median1 min=min1 max=max1 lclm=lci1  
uclm=uci1;
```

```
run;
```

```
data results02;
```

```
set results01;
```

```
attrib meansd length=$20.
```

```
minmax length=$20.
```

```
n length=$20.
```

```
median length=$20.
```

```
aci length=$20.;
```

*when counts <4 part: as per email dated 06Aug2015 11:22 AM from John: they would like to see the actual n on that row and then have NC for the rest of the statistics;

```
if n1<4 then do;
```

```
n=left(compress(put(n1,8.))); median='NC'; meansd='NC'; minmax='NC'; aci='NC';
```

```
end;
```

```
else do;
```

```
n = left(compress(put(n1,8.)));
```

```
if not missing(median1) then median = left(compress(put(round(median1,0.01),8.2)));
```

```
else median = "0.00";
```

```
if not missing(mean1) and not missing(std1) then meansd =  
left(compress(put(round(mean1,0.01),8.2))) || ' (' || left(compress(put(0.001*ceil(std1/0.001),8.3))) ||  
' )';
```

```
else if mean1=. and not missing(std1) then meansd = 'NC (' ||  
left(compress(put(0.001*ceil(std1/0.001),8.3))) || ' )';
```

```
        else if std1=. and not missing(mean1) then meansd =  
left(compress(put(round(mean1,0.01),8.2))) || ' (NC' || ' ');
```

```
        else if mean1=. and std1=. then meansd = 'NC (' || 'NC' || ' ');
```

```
        if not missing(min1) and not missing(max1) then minmax =  
left(compress(put(min1,8.1))) || ' , ' || left(compress(put(max1,8.1)));
```

```
        else if min1=. and max1=. then minmax="0.0 , 0.0";
```

```
        if not missing(lci1) and not missing(uci1) then aci = strip(put(0.01*floor(lci1/0.01),8.2)) || ' , '  
|| strip(put(0.01*ceil(uci1/0.01),8.2));
```

```
        else if lci1=. and not missing(uci1) then aci = 'NC, ' ||  
strip(put(0.01*ceil(uci1/0.01),8.2));
```

```
        else if uci1=. and not missing(lci1) then aci = strip(put(0.01*floor(lci1/0.01),8.2)) || ' , '  
|| 'NC';
```

```
        else if lci1=. and uci1=. then aci = 'NC, ' || 'NC' ;
```

```
        end;
```

*Each sub-category needs to have n > 4 to display for that given product in that given period per
email from John on Fri 6/12/2015 10:31 AM;

```
        if order3 in (1 2 3) then do;
```

```
            if order2 in (1 2 3 4) and n1=. then delete;
```

```
            else if order2 in (1 2 3 4) and n1<=4 then delete;
```

```
        end;
```

```
*format blank cell;
```

```
if n = " " then n = "0";
```

```
drop n1 mean1 std1 median1 min1 max1 uci1 lci1 ;
```

```
run;
```

```
proc transpose data=results02 out=results03 prefix=_ name=varname;
```

```
by trt order3 PARAMCD ;
```

```
var n meansd median minmax aci ;
```

```
id order2;
```

```
run;
```

```
data results04;
```

```
retain trt product period stat _1 _2 _3 _4 order3;
```

```
set results03;
```

```
length stat period product $50;
```

```
if upcase(varname)='N' then do; statord=1; stat='n'; end;
```

```
if upcase(varname)='MEDIAN' then do; statord=4; stat='Median'; end;
```

```
if upcase(varname)='MINMAX' then do; statord=5; stat='Min, Max'; end;
```

```
if upcase(varname)='MEANSD' then do; statord=2; stat='Mean (SD)'; end;
```

```
if upcase(varname)='ACI' then do; statord=3; stat='95% CI'; end;
```

```
period=&APUPERC.;
```

```
*convert paramcd to product name;
```

```
if paramcd = "PDTHS2_2" or paramcd = "ADTHS2_2" then product = "THSm2.2";
```

```
if paramcd = "PDMCC" or paramcd = "ADMCC" then product = "mCC/CC";
```

```
if paramcd = "PDCHWMKL" or paramcd = "ADCHWMKL" then product = "Chew/Smokeless Tob."
```

```
;
```

```
if paramcd = "PDCIGARS" or paramcd = "ADCIGARS" then product = "Cigar/Cigarillo";
```



```

if paramcd = "PDE_CIG" or paramcd = "ADE_CIG" then product = "E-Cigarette";

if paramcd = "PDGUMS" or paramcd = "ADGUMS" then product = "Gums";

if paramcd = "PDINHAL" or paramcd = "ADINHAL" then product = "Inhaler";

if paramcd = "PDLOZENG" or paramcd = "ADLOZENG" then product = "Lozenges";

if paramcd = "PDNASPR" or paramcd = "ADNASPR" then product = "Nasal Spray";

if paramcd = "PDOTHNRT" or paramcd = "ADOTHNRT" then product = "Other NRT";

if paramcd = "PDPATCHE" or paramcd = "ADPATCHE" then product = "Patches";

if paramcd = "PDPIPE" or paramcd = "ADPIPE" then product = "Pipes";

if paramcd = "PDOTHTOB" or paramcd = "ADOTHTOB" then product = "Tob. Not Listed";


*format empty cell to 0 per JH email on 7/2/2015 2:59 PM;

array cat{7} $20. _1 _2 _3 _4 _5 _6 _7;

do i=1 to 7;

    if upcase(varname)='N' and cat{i}="" then cat{i}='0';

end;


drop varname paramcd;

run;


proc sort data=results04 out=&out.;

    by trt order3 product period statord;

run;

%mend mmeans;


%mmeans(APUPERC='Period 2', GPUCAT=GPUCAT2, PUCAT=PUCAT2, pucat_ex=pucat2ex, out=p2);

```

```
%mmeans(APUPERC='Period 3', GPUCAT=GPUCAT3, PUCAT=PUCAT3, pucat_ex=pucat3ex, out=p3);  
  
%mmeans(APUPERC='Period 4', GPUCAT=GPUCAT4, PUCAT=PUCAT4, pucat_ex=pucat4ex, out=p4);  
  
%mmeans(APUPERC='Entire Ambulatory Period', GPUCAT=GPUCAT5, pucat=PUCAT5,  
pucat_ex=pucat5ex, out=p5);
```

```
*set together per mock;
```

```
data fin;
```

```
retain product period stat _1 _2 _3 _4 statord order3 perd prd trt;
```

```
set p2 p3 p4 p5;
```

```
*order product name;
```

```
if product="THSm2.2" then do; prd = 1; end ;
```

```
if product="mCC/CC" then do; prd = 2; end ;
```

```
if product="Chew/Smokeless Tob." then do; prd = 3; end ;
```

```
if product="Cigar/Cigarillo" then do; prd = 4; end ;
```

```
if product="E-Cigarette" then do; prd = 5; end ;
```

```
if product="Gums" then do; prd = 6; end ;
```

```
if product="Inhaler" then do; prd = 7; end ;
```

```
if product="Lozenges" then do; prd = 8; end ;
```

```
if product="Nasal Spray" then do; prd = 9; end ;
```

```
if product="Other NRT" then do; prd = 10; end ;
```

```
if product="Patches" then do; prd = 11; end ;
```

```
if product="Pipes" then do; prd = 12; end ;
```

```
if product="Tob. Not Listed" then do; prd = 13; end ;
```

```

*period order;

if period="Period 2" then perd=2;

if period="Period 3" then perd=3;

if period="Period 4" then perd=4;

if period="Entire Ambulatory Period" then perd=5;

run;


proc sort data=fin;

    by trt order3 prd perd statord;

run;


*group THS 2.2 for THSm arm;

data final2;

    set fin;

    if order3=1 and trt=1;

run;


*only keep products with _1 _2 _3 column not empty (or 0 value);

proc sql;

    create table final2s as

    select product, period, stat, _1, _2, _3, _4, _5, _6, _7, statord, order3, perd, prd, trt

    from final2

    where (_1 ne " and _2 ne " and _3 ne ") and (_1 ne '0' and _2 ne '0' and _3 ne '0')

    order by trt, order3, prd, perd, statord;

```

```
quit;
```

```
*group Dual for THSm arm;
```

```
data final3;
```

```
    set fin;
```

```
    if order3=2 and trt=1;
```

```
run;
```

```
proc sql;
```

```
    create table final3s as
```

```
    select product, period, stat, _1, _2, _3, _4, _5, _6, _7, statord, order3, perd, prd, trt
```

```
    from final3
```

```
    where (_1 ne "" and _2 ne "" and _3 ne "") and (_1 ne '0' and _2 ne '0' and _3 ne '0')
```

```
    order by trt, order3, prd, perd, statord;
```

```
quit;
```

```
*group CC for THSm arm;
```

```
data final4;
```

```
    set fin;
```

```
    if order3=3 and trt=1;
```

```
run;
```

```
proc sql;
```

```
    create table final4s as
```

```
    select product, period, stat, _1, _2, _3, _4, _5, _6, _7, statord, order3, perd, prd, trt
```

```
    from final4
```

```
    where (_1 ne "" and _2 ne "" and _3 ne "") and (_1 ne '0' and _2 ne '0' and _3 ne '0')
```

```

        order by trt, order3, prd, perd, statord;

quit;

*group CC for mCC arm;

data final5;

    set fin;

    if order3=4 and trt=2;

run;

*group Abstinent for SA arm;

data final6;

    set fin;

    if order3=5 and trt=3;

run;

data final(keep=product period stat _1 _2 _3 _4 _5 _6 _7 statord order3 perd prd trtan trt );

    set final1 final2s final3s final4s final5 final6;

    if order3 in (0 1 2 3 ) then trtan=4;

    else if order3=4 then trtan=5;

    else if order3=5 then trtan=3;

    if period='Entire Ambulatory Period' then period='Overall';

run;

/*output report data; */

%let tflno=T_15_02_02_05_01;

```

```

data tflds.T_15_02_02_05_01;

    set final ;

run;

data paging;

    set final;

        if ln >= 10 or (trt=1 and order3=1 and product='THSm2.2' and period='Period 2' and stat='n')
                                or (trt=1 and order3=2 and product='THSm2.2' and period='Period 2'
and stat='n')
                                or (trt=1 and order3=3 and product='THSm2.2' and period='Period 2'
and stat='n')
                                or (trt=2 and order3=4 and product='mCC/CC' and period='Period 2'
and stat='n')
                                or (trt=3 and order3=5 and product='mCC/CC' and period='Period 2'
and stat='n')
                                then ln=1;

        else ln+1;

        if ln=1 then page+1;

        call symput("page",compress(put(page,best.)));

run;

*create rtf report;

options number nodate orientation=landscape 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;


ods path stdlib.t106343 (read) ;

ods results off;

ods rtf toc_data file="/cvn/projects/prj/data/000000106343/TFL/&TFL_Part./Tables/&tflno..rtf"
style=t106343 startpage=yes headery=1440 footery=1440 ;

ods noproctitle;


%macro outrtf(blankn=130, halfbink=N);


%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", ""));

        call symput('TFLprg',reverse(scan(strip(reverse(compress("&_SASPROGRAMFILE", ""))),1,"/")));

run;


%if &halfbink=N %then %let halfbink=;

%else %if &halfbink=Y %then %let halfbink=~;


%do i=1 %to &page;


title ;

```

```
footnote;
```

```
data comp;
```

```
    set paging end=eof;
```

```
        where page=&i;
```

```
    /* Amend title as needed */
```

```
        _firtitl="Table 15.2.2.5.1  Summary of Average Reported Daily Product Use by Product  
Use Category in Ambulatory";
```

```
        _upcas=(length(_firtitl)-length(compress(_firtitl,'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.)));
```

```
            call symput('title2', "Period - FAS ");
```

```
        end;
```

```
        drop _firtitl _upcas len;
```

```
run;
```

```
proc sql noprint;
```

```
    select distinct(order3) into :ord from comp;
```

```
quit;
```

```
ods proclabel = ' ';
```

```
ods listing close;
```



```
proc report data = comp headline headskip nowd split = '$' spanrows %if &i=1 %then %do; contents=' '
%end; %else %do; contents="" %end;;
```

```
    %if &ord.=0 %then %do;
```

```
        column order3 page prd product perd period stat ("THSm2.2 Product Use
Category&linebot" _1 _2 _3 _4 /*_5*/ _6) ("Overall" _7); *only display columns with data;
```

```
        define order3    / order order = internal noprint;
```

```
            define page    / order order = internal noprint;
```

```
            define prd      / group noprint;
```

```
            define perd     / group noprint;
```

```
            define product  / group style={just=left cellwidth=1.5cm} "Product";
```

```
            define period   / group style={just=left cellwidth=1.2cm} "Period";
```

```
            define stat     / display style={just=left cellwidth=1.2cm} "Statistic";
```

```
                define _1          / display style={just=c cellwidth=1.3cm}
style(header)={just=center} "THSm2.2$([70-100]%)";
```

```
                define _2          / display style={just=c cellwidth=1.3cm}
style(header)={just=center} "Dual Use$([30-70]%)";
```

```
                define _3          / display style={just=c cellwidth=1.3cm} style(header)={just=center}
"CC$([0-30]%)";
```

```
                define _4          / display style={just=c cellwidth=1.3cm} style(header)={just=center}
"Not Abstinent";
```

```
/*                define _5          / display style={just=c cellwidth=1.1cm} style(header)={just=center}
"Predomin. Abstinent"; */
```

```
                define _6          / display style={just=c cellwidth=1.1cm} style(header)={just=center}
"Abstinent";
```

```
                define _7          / display style={just=c cellwidth=1.3cm} style(header)={just=center}
"$THSm2.2$(N=&trt1)";
```

```
        %end;
```

```
    %else %if &ord.=1 %then %do;
```

column order3 page prd product perd period stat ("THSm2.2 Product Use
Category&linebot" _1 _2 _3) _4;

```

define order3    / order order = internal noprint;

define page      / order order = internal noprint;

define prd       / order order = internal noprint;

define perd      / order order = internal noprint;

define product   / order order = internal style={just=left cellwidth=1.9cm} "Product";

define period    / order order = internal style={just=left cellwidth=1.0cm} "Period";

define stat      / display style={just=left cellwidth=0.9cm} "Statistic";

define _1        / display style={just=c cellwidth=1.8cm}
style(header)={just=center} "Primarily THSm2.2$([70-95]%)";

define _2        / display style={just=c cellwidth=1.8cm}
style(header)={just=center} "Exclusively THSm2.2$([95-100]%)";

define _3        / display style={just=c cellwidth=1.8cm} style(header)={just=center}
"Predominantly THSm2.2$(100%)";

define _4        / display style={just=c cellwidth=1.8cm} style(header)={just=center}
"THSm2.2$([70-100]%)";

%end;

%else %if &ord.=2 %then %do;

```

column order3 page prd product perd period stat ("THSm2.2 Product Use
Category&linebot" _1 _2 _3) _4;

```

define order3    / order order = internal noprint;

define page      / order order = internal noprint;

define prd       / order order = internal noprint;

define perd      / order order = internal noprint;

define product   / order order = internal style={just=left cellwidth=1.9cm} "Product";

define period    / order order = internal style={just=left cellwidth=1.0cm} "Period";

define stat      / display style={just=left cellwidth=0.9cm} "Statistic";

```

```

define _1          / display style={just=c cellwidth=1.8cm}
style(header)={just=center} "Dual Mostly THSm2.2$([60-70]%)";

define _2          / display style={just=c cellwidth=1.8cm}
style(header)={just=center} "Dual Balanced$([40-60]%)";

define _3          / display style={just=c cellwidth=1.8cm} style(header)={just=center}
"Dual Mostly CC$([30-40]%)";

define _4          / display style={just=c cellwidth=1.8cm} style(header)={just=center}
"Dual $([30-70]%)";

%end;

%else %if &ord.=3 %then %do;

column order3 page prd product perd period stat ("THSm2.2 Product Use
Category&linebot" _1 _2 _3) _4;

define order3      / order order = internal noprint;

define page        / order order = internal noprint;

define prd         / order order = internal noprint;

define perd        / order order = internal noprint;

define product     / order order = internal style={just=left cellwidth=1.9cm} "Product";

define period      / order order = internal style={just=left cellwidth=1.0cm} "Period";

define stat        / display style={just=left cellwidth=0.9cm} "Statistic";

define _1          / display style={just=c cellwidth=1.8cm}
style(header)={just=center} "Predominantly CC$([5-30]%)";

define _2          / display style={just=c cellwidth=1.8cm}
style(header)={just=center} "Primarily CC$([0-5]%)";

define _3          / display style={just=c cellwidth=1.8cm} style(header)={just=center}
"Exclusively CC$(0%)";

define _4          / display style={just=c cellwidth=1.8cm} style(header)={just=center}
"CC$([0-30]%)";

%end;

%else %if &ord.=4 %then %do;

```

```
column order3 page prd product perd period stat ("mCC Product Use Category&linebot"
_1 _2 ) ("mCC" _4);
```

```
define order3 / order order = internal noprint;

define page / order order = internal noprint;

define prd / order order = internal noprint;

define perd / order order = internal noprint;

define product / order order = internal style={just=left cellwidth=1.9cm} "Product";

define period / order order = internal style={just=left cellwidth=1.1cm} "Period";

define stat / display style={just=left cellwidth=1.1cm} "Statistic";

define _1 / display style={just=c cellwidth=1.2cm}
style(header)={just=center} "Exclusively CC";

define _2 / display style={just=c cellwidth=1.2cm}
style(header)={just=center} "Dual CC";

define _4 / display style={just=c cellwidth=1.2cm} style(header)={just=center}
"$ (N=&trt2)";

%end;

%else %if &ord.=5 %then %do;
```

```
column order3 page prd product perd period stat ("SA Product Use Category&linebot"
_1 _2 _3) _4;
```

```
define order3 / order order = internal noprint;

define page / order order = internal noprint;

define prd / order order = internal noprint;

define perd / order order = internal noprint;

define product / order order = internal style={just=left cellwidth=1.9cm} "Product";

define period / order order = internal style={just=left cellwidth=1.0cm} "Period";

define stat / display style={just=left cellwidth=0.9cm} "Statistic";

define _1 / display style={just=c cellwidth=1.8cm}
style(header)={just=center} "Abstinent";
```

```

define _2 / display style={just=c cellwidth=1.8cm}
style(header)={just=center} "Predominantly Abstinent";

define _3 / display style={just=c cellwidth=1.8cm} style(header)={just=center}
"Not Abstinent";

define _4 / display style={just=c cellwidth=1.8cm} style(header)={just=center}
"SA$(N=&trt3)";

%end;

break after page / page;

compute before page / style={just=left protectspecialchars=off};

line "&linetop";

endcomp;

compute after page / style={just=left protectspecialchars=off};

line "&linebot";

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 "\b\fs24\sa24&title2." ;

line "&linebot";

endcomp;

compute after _page_ / style={just=left protectspecialchars=off};

line 'Note: CC = Menthol conventional cigarettes; SA = Smoking abstinence; THSm2.2 =
Tobacco Heating System 2.2 Menthol.';

```

```

        line %nrquote ('Note: Periods defined as Period 2 ([Day 6 ambulatory - Day 30 Visit]),
Period 3 ([Day 30 Visit - Day 60 Visit]) and Period 4 ([Day 60 Visit - Day 90 Visit]).');

        line 'Note: NC = Not calculated.';

        line 'Note: Tob. Not Listed refers to other tobacco products not previously listed.';

        line ' ';

        line 'Appendix 15.3.2.1.3';

        line "Study ID:ZRHM-REXA-08-US Program:&TFLprg  Status: &status" &_blankn.*"\~\~"
"&sysdate" &_blankn.*"\~\~" "(Page &i of &page)";

        endcomp;

run;

%end;

%mend outrtf;


%outrtf(blankn=26, halfblnk=N);


ods rtf close;

ods results on;

ods path sashelp.tmplmst (read);


ods listing;


%m_logchk;


/***** END OF FILE t_avg_prduse_cat_fas.sas *****/

```

