

```

dm log 'clear'; dm out 'clear';
/*2006 Data Users Conference - NAMCS/NHAMCS Hands On Exercises
SAS Exercises*/
*****;
/*Exercise 1 - Reading 2005 NAMCS public use data*/
/*Read NAMCS data & create a SAS dataset called namcsduc */

filename namcs05 'c:\duc_08\nam05'; /*data file*/

filename nam05inp 'c:\duc_08\nam05inp.txt'; /*input*/
filename nam05for 'c:\duc_08\nam05for.txt'; /*formats*/
filename nam05lab 'c:\duc_08\nam05lab.txt'; /*lables*/

%inc nam05for;

data namcsduc;
infile namcs05 missover lrecl=999;
%inc nam05inp;
%inc nam05lab;
patwt1k=patwt/1000;
keep phycode patcode ager sex diag13d patwt patwt1k cpsum cstratm
scopewi1 scopewi2
diagsc1 diagsc2 othproc1 othproc2 othproc3 othproc4 specr timemd;
run;
proc print data=namcsduc (obs=5);
title '2005 NAMCS Visits-Selected Variables';
run;
*****;
/* Exercise 2-Simple Frequencies, unweighted & weighted */
/* Estimate the number of office visits by sex & age */

proc freq data=namcsduc;
tables sex*ager;
title 'Exercise 2a-Unweighted 2005 NAMCS Visits: Sex by Age';
run;
proc freq data=namcsduc;
tables sex*ager /list;
weight patwt1k;
title 'Exercise 2b-Weighted 2005 NAMCS Visits: Sex by Age';
run;
*****;
/*Exercise 3- Simple Frequencies with standard errors, SURVEYFREQ */
/*Estimate the number of office visits by sex & age with SEs */
proc surveyfreq data=namcsduc;
tables sex*ager /clwt cl;
cluster cpsum;
strata cstratm;
weight patwt1k;
title 'Exercise 3-2005 NAMCS Visits-Sex by Age '; run;
*****;
/*Exercise 4 - Transforming data, SURVEYFREQ */
/*Breakdown of primary dx-listed asthma visits by sex*/ data namex4;
set namcsduc;
if DIAG13D='493' then asthma=1;
else asthma=2;
proc surveyfreq data=namex4;

```

```

tables sex*asthma /row;
cluster cpsum;
strata cstratm;
weight patwtlk;
title 'Exercise 4 - 2005 NAMCS Asthma Visits by Sex'; run;
*****;
/*Exercise 5 - Creating asthma visit rates, SURVEYFREQ*/ data namex5;
set namex4;
totrt=(patwt/291155919)*100;
if sex=1 then sexwt=(patwt/148713789)*100;
if sex=2 then sexwt=(patwt/142442130)*100;
/* 5a - Total asthma visits per 100 persons...note - this will give you
the correct visit
rate per 100 persons, but incorrect rate per 100 male/female */
proc surveyfreq data=namex5;
tables asthma*sex /clwt;
cluster cpsum;
strata cstratm;
weight totrt;
Title 'Exercise 5a - 2005 NAMCS Asthma Visits per 100 persons'; run;
/* 5b - Total asthma visits per 100 male/female...note - this will give
you the
correct visit rate per 100 male/female, but the incorrect visit rate
per 100 persons.*/
proc surveyfreq data=namex5;
tables asthma*sex /clwt;
cluster cpsum;
strata cstratm;
weight sexwt;
Title 'Exercise 5b - 2005 NAMCS Asthma Visits per 100 male/female';
run;
*****;
/*Exercise 6-Estimate total number of digestive write-in procedures*/
data namex6;
set namcsduc;
*****;
totproc=0;
*****;
array procs(8) scopewil scopewi2 diagsc1 diagsc2 othproc1 othproc2
othproc3 othproc4;
do j=1 to 8;
sixproc = procs(j);
if sixproc ge '42 ' and sixproc le '5499' then totproc=totproc+1;*ICD-
9 digestive;
end;
proc surveymeans data=namex6 nobs sum;
cluster cpsum;
strata cstratm;
var totproc;
weight patwt;
Title "Exercise 6 - 2005 NAMCS Write-In Digestive Procedures";
run;
*****;
/*Exercise 7-Mean number of minutes spent with physician by physician
specialty*/
data namex7;
set namcsduc;

```

```

if timemd=0 then timemd=.; /*used to delete timemd=0 visits*/
proc surveymeans data=namex7 nobs sum stderr mean;
domain specr;
class specr;
cluster cpsum;
strata cstratm;
var timemd;
weight patwtlk;
Title "Exercise 7 - 2005 NAMCS Time Spent with Physician by Specialty";
run;
/*****
SUDAAN Exercises:
*****/
/*Exercise 3-Simple Frequencies with standard errors-SUDAAN*/
/*Estimate the number of office visits by sex & age with SEs*/
proc sort data=namcsduc;
by cstratm cpsum;
proc crosstab data=namcsduc filetype=sas DESIGN = WR;
NEST cstratm cpsum;
weight patwtlk;
class sex ager /nofreqs;
tables sex*ager;
print nsum wsum sewgt totper setot/ nsumfmt=f8 wsumfmt=f8
sewgtfmt=f8.1 colperfmt=f8.1 secolfmt=f8.1
style=nchs;
run;
/*****
/*Exercise 4 - Transforming data, SUDAAN*/
/*Breakdown of primary dx-listed asthma visits by sex*/
data namex4;
set namcsduc;
if DIAG13D='493' then asthma=1;
else asthma=2;
proc sort data=namex4;
by cstratm cpsum;
proc crosstab data=namex4 filetype=sas DESIGN = WR;
NEST cstratm cpsum;
weight patwtlk;
*subpopn asthma=1;
class asthma sex /nofreqs;
tables asthma*sex;
print nsum wsum sewgt totper setot rowper serow /
nsumfmt=f8. wsumfmt=f10 sewgtfmt=f8 totperfmt=f8.1
rowperfmt=f8.1 serowfmt=f8.1 style=nchs;
run;
/*****
/*Exercise 5 - Creating asthma visit rates, SURVEYFREQ*/
/*Estimate number of visits for asthma per 100 persons*/
data namex5;
set namex4;
totrt=(patwt/291155919)*100;
if sex=1 then sexwt=(patwt/148713789)*100;
if sex=2 then sexwt=(patwt/142442130)*100;
proc sort data=namex5;
by cstratm cpsum;
/* 5a - Total asthma visits per 100 persons...note - this will give you
the correct

```

```

visit rate per 100 persons, but incorrect rate per 100 male/female */
proc crosstab data=namex5 filetype=sas DESIGN = WR;
  NEST cstratm cpsum;
  weight tottrt;
  class asthma sex /nofreqs;
  tables asthma*sex;
  print nsum wsum sewgt /
  wsumfmt=f10.1 sewgtfmt=f8.1 nsumfmt=f8.
  style=nchs;
run;
/* 5b - Total asthma visits per 100 male/female...note - this will give
you the correct
visit rate per 100 male/female, but the incorrect visit rate per 100
persons. */
proc crosstab data=namex5 filetype=sas DESIGN = WR;
  NEST cstratm cpsum;
  weight sexwt;
  class asthma sex /nofreqs;
  tables asthma*sex;
  print nsum wsum sewgt /
  wsumfmt=f10.1 sewgtfmt=f8.1 nsumfmt=f8.
  style=nchs;
run;
*****;
/*Exercise 6-Estimate total number of digestive write-in procedures*/
data namex6;
  set namcsduc;
  *****;
  totproc=0;
  *****;
  array procs(8) scopewi1 scopewi2 diagsc1 diagsc2 othproc1 othproc2
  othproc3 othproc4;
  do j=1 to 8;
    sixproc = procs(j);
    if sixproc ge '42 ' and sixproc le '5499' then totproc=totproc+1;*ICD-
    9 digestive;
  end;
proc sort data=namex6;
  by cstratm cpsum;
proc describe data=namex6 filetype=sas DESIGN = WR;
  NEST cstratm cpsum;
  weight patwtlk;
  var totproc;
  print total settotal nsum /
  totalfmt=f13.3 settotalfmt=f10.3 nsumfmt=f8.
  style=nchs;
run;
*****;
/*Exercise 7-Mean number of minutes spent with physician*/
data namex7;
  set namcsduc;
proc sort data=namex7;
  by cstratm cpsum;
proc describe data=namex7 filetype=sas DESIGN = WR;
  NEST cstratm cpsum;
  weight patwtlk;
  subpopn timemd>0;

```

```
class specr /nofreqs;  
var timemd;  
print mean semean nsum /  
totalfmt=f10.3 settotalfmt=f8.3 nsumfmt=f8.  
style=nchs;  
run;  
*****;
```