HCUP Online Tutorial Resource: National Estimates Example Code and Output

CODE: Count Records with DXCCS1=128 (Asthma) from 2014 NIS File (example 1)

```
Title1 “Count Records with DXCCS1=128 (Asthma) from 2014 NIS”;
Libname NIS2014  "C:\NIS\2014\SASDATA";
options obs = MAX PageSize=51 LineSize=146 ;

data asthma;
    set NIS2014.nis_2014_core
        (keep=KEY_NIS HOSP_NIS DISCWT NIS_STRATUM DXCCS1);
    Attrib DXCCS1 Length=3 Label='Asthma DXCCS1=128';
    if dxccs1 eq 128 then asthma = 1;
    else asthma = 0;
run;

PROC SURVEYMEANS DATA=asthma SUM STD MEAN STDERR ;
    VAR Asthma;
    CLUSTER HOSP_NIS ;
    STRATA NIS_STRATUM ;
run;
```

OUTPUT: Count Records with DXCCS1=128 (Asthma) from 2014 NIS File (example 2)

```
                 Count Records with DXCCS1=128 (Asthma) from 2014 NIS File

                               The SURVEYMEANS Procedure

                                     Data Summary

                       Number of Strata                  206
                       Number of Clusters               4411
                       Number of Observations        7071762


                                      Statistics

                                        Std Error                          Std Error
    Variable              Mean            of Mean               Sum           of Sum
    --------------------------------------------------------------------------------
    Asthma            0.009613           0.000177             67978      1300.693790
    --------------------------------------------------------------------------------
```

CODE: Produce National Estimate of Discharges with DXCCS1=128 (Asthma) from 2014 NIS File (Weighted) (example 3)

```
Title1 'Produce National Estimate of Discharges with DXCCS1=128 (Asthma)
from 2014 NIS File (Weighted)';
Libname nis2014  "C:\NIS\2014\SASDATA";
options obs = MAX PageSize=51 LineSize=146 ;

data asthma;
   set NIS2014.nis_2014_core
       (keep=KEY_NIS HOSP_NIS DISCWT NIS_STRATUM DXCCS1);
   Attrib DXCCS1 Length=3 Label='Asthma DXCCS1=128';
   if DXCCS1 eq 128 then Asthma = 1;
   else Asthma = 0;
run;

PROC SURVEYMEANS DATA=asthma SUM STD MEAN STDERR ;
   VAR Asthma;
   WEIGHT DISCWT;
   CLUSTER HOSP_NIS ;
   STRATA NIS_STRATUM ;
run;
```

OUTPUT: Produce National Estimate of Discharges with DXCCS1=128 (Asthma) from 2014 NIS File (Weighted) (example 4)

```
          Produce National Estimate of Discharges with DXCCS1=128 (Asthma) from 2014 NIS File
                                              (Weighted)

                                       The SURVEYMEANS Procedure

                                             Data Summary

                              Number of Strata                 206
                              Number of Clusters              4411
                              Number of Observations       7071762
                              Sum of Weights              35358818


                                              Statistics

                                            Std Error                            Std Error
      Variable              Mean              of Mean               Sum             of Sum
      ------------------------------------------------------------------------------------
      Asthma            0.009613             0.000177            339890        6503.481491
      ------------------------------------------------------------------------------------
```

CODE: Produce Regional Estimates of Discharges with DXCCS1=128 (Asthma) from 2014 NIS File (Weighted) (example 5)

```
Title1 “Produce Regional Estimates of Discharges with DXCCS1=128 (Asthma)
from 2014 NIS File (Weighted)”;
Libname nis2014 "C:\NIS\2014\SASDATA";
options obs = MAX PageSize=51 LineSize=146 ;

Proc Format;
    Value St_Regn
        1 = '1: Northeast'
        2 = '2: Midwest  '
        3 = '3: South    '
        4 = '4: West     '
    ;
Run;
data asthma;
   Merge NIS2014.nis_2014_core
             (keep=KEY_NIS HOSP_NIS DISCWT NIS_STRATUM DXCCS1)
         NIS2014.nis_2014_Hospital (keep=HOSP_NIS HOSP_REGION)
   ;
   By HOSP_NIS;
   Attrib Asthma Length=3 Label='Asthma DXCCS1=128' ;
   if dxccs1 eq 128 then asthma = 1;
   else asthma = 0;
   format HOSP_REGION st_regn.;
run;

PROC SURVEYMEANS DATA=asthma SUM STD MEAN STDERR ;
   VAR asthma;
   WEIGHT DISCWT ;
   CLUSTER HOSP_NIS ;
   STRATA NIS_STRATUM ;
   DOMAIN HOSP_REGION ;
run;
```

OUTPUT: Produce Regional Estimates of Discharges with DXCCS1=128 (Asthma) from 2014 NIS File (Weighted) (example 6)

Produce Regional Estimates of Discharges with DXCCS1=128 (Asthma) from 2014 NIS File
(Weighted)

The SURVEYMEANS Procedure

Data Summary

Number of Strata	206
Number of Clusters	4411
Number of Observations	7071762
Sum of Weights	35358818

Statistics

Variable	Label	Mean	Std Error of Mean	Sum	Std Error of Sum
Asthma	Asthma DXCCS1=128	0.009613	0.000177	339890	6503.481491

Produce Regional Estimates of Discharges with DXCCS1=128 (Asthma) from 2014 NIS File
(Weighted)

The SURVEYMEANS Procedure

Domain Statistics in HOSP_REGION

Region of hospital	Variable	Label	Mean	Std Error of Mean	Sum	Std Error of Sum
1: Northeast	Asthma	Asthma DXCCS1=128	0.012498	0.000608	82785	4197.759358
2: Midwest	Asthma	Asthma DXCCS1=128	0.009817	0.000363	77975	2895.229590
3: South	Asthma	Asthma DXCCS1=128	0.009010	0.000219	124110	3253.093753
4: West	Asthma	Asthma DXCCS1=128	0.007840	0.000337	55020	2389.375342

CODE: Count Hospitals with HOSP_LOCTEACH=3 from 2014 NIS HOSPITAL File (example 7)

```
Title1 “Count Hospitals with HOSP_LOCTEACH=3 from 2014 NIS HOSPITAL File”;
libname nis2014 "C:\NIS\2014\SASDATA";
options obs = MAX PageSize=51 LineSize=146 ;

Data NIS_Hospitals;
   Set NIS2014.nis_2014_hospital (keep=HOSP_NIS NIS_STRATUM HOSP_LOCTEACH);
   Attrib Urban_Teach length=3 label='Urban Teaching Hospital';
   Urban_Teach =(HOSP_LOCTEACH=3);
Run;

PROC SURVEYMEANS DATA=NIS_Hospitals SUM STD MEAN STDERR ;
   VAR Urban_Teach;
   CLUSTER HOSP_NIS ;
   STRATA NIS_STRATUM ;
run;
```

OUTPUT: Count Hospitals with HOSP_LOCTEACH=3 from 2014 NIS HOSPITAL File (example 8)

```
                        Count Hospitals with HOSP_LOCTEACH=3 from 2014 NIS HOSPITAL File

                                         The SURVEYMEANS Procedure

                                               Data Summary

                                 Number of Strata                 206
                                 Number of Clusters              4411
                                 Number of Observations          4411


                                                Statistics

                                                                 Std Error                              Std Error
Variable       Label                               Mean            of Mean                Sum             of Sum
-------------------------------------------------------------------------------------------------------------------
Urban_Teach    Urban Teaching Hospital         0.311947                  0        1376.000000      7.063366E-15
-------------------------------------------------------------------------------------------------------------------
```

CODE: Count Records with DXCCS1=123 (Influenza) from 2014 NEDS File (example 9)

```
Title1 'Count Records with DXCCS1=123 (Influenza) from 2014 NEDS File';
libname neds2014 "C:\NEDS\2014\SASDATA";
options obs = MAX PageSize=51 LineSize=146 ;

data influenza1;
   set NEDS2014.neds_2014_core (keep=HOSP_ED DISCWT NEDS_STRATUM DXCCS1);
   Attrib Influenza length=3 label="Influenza DXCCS1=123";
   if dxccs1 eq 123 then influenza = 1;
   else influenza = 0;
run;

PROC SURVEYMEANS DATA=influenza1 SUM STD MEAN STDERR ;
   VAR influenza;
   CLUSTER HOSP_ED ;
   STRATA NEDS_STRATUM ;
run;
```

OUTPUT: Count Records with DXCCS1=123 (Influenza) from 2014 NEDS File (example 10)

Count Records with DXCCS1=123 (Influenza) from 2014 NEDS File

The SURVEYMEANS Procedure

Data Summary

Number of Strata	86
Number of Clusters	945
Number of Observations	31026417

Statistics

Variable	Label	Mean	Std Error of Mean	Sum	Std Error of Sum
Influenza	Influenza DXCCS1=123	0.005664	0.000132	175741	5960.015903

CODE: Produce National Estimate of Discharges with DXCCS1=123 (Influenza) from 2014 NEDS File (weighted) (example 11)

```
Title1 ‘Produce National Estimate of Discharges with DXCCS1=123 (Influenza)
from 2014 NEDS File (Weighted)';
libname neds2014 “C:\NEDS\2014\SASDATA”;
options obs = MAX PageSize=51 LineSize=146 ;

data influenza1;
   set NEDS2014.neds_2014_core (keep=HOSP_ED DISCWT NEDS_STRATUM DXCCS1);
   Attrib Influenza length=3 label="Influenza DXCCS1=123";
   if dxccs1 eq 123 then influenza = 1; else influenza = 0;
run;

PROC SURVEYMEANS DATA=influenza1 SUM STD MEAN STDERR ;
   VAR  influenza;
   WEIGHT DISCWT;
   CLUSTER HOSP_ED ;
   STRATA NEDS_STRATUM ;
run;
```

OUTPUT: Produce National Estimate of Discharges with DXCCS1=123 (Influenza) from 2014 NEDS File (Weighted) (example 12)

```
Produce National Estimate of Discharges with DXCCS1=123 (Influenza) from 2014 NEDS File (Weighted)

                                        The SURVEYMEANS Procedure

                                              Data Summary

                                Number of Strata                  86
                                Number of Clusters               945
                                Number of Observations      31026417
                                Sum of Weights             137807901


                                               Statistics

                                                                Std Error                        Std Error
Variable     Label                                Mean            of Mean             Sum           of Sum
------------------------------------------------------------------------------------------------
Influenza    Influenza DXCCS1=123             0.005679           0.000133          782665            26109
------------------------------------------------------------------------------------------------
```

CODE: Produce Regional Estimates of Discharges with DXCCS1=123 (Influenza) from 2014 NEDS File (Weighted) (example 13)

```
Title1 'Produce Regional Estimates of Discharges with DXCCS1=123
(Influenza) from 2014 NEDS File (Weighted)';
libname neds2014 'C:\NEDS\2014\SASDATA';
options obs = MAX PageSize=51 LineSize=146 ;

Proc Format;
    Value St_Regn
        1 = '1: Northeast'
        2 = '2: Midwest  '
        3 = '3: South    '
        4 = '4: West     '
    ;
Run;
data influenza1;
   Merge NEDS2014.neds_2014_core (keep=HOSP_ED DISCWT NEDS_STRATUM DXCCS1)
         NEDS2014.neds_2014_Hospital (keep=HOSP_ED HOSP_REGION)
   ;
   By HOSP_ED;
   Attrib Influenza length=3 label="Influenza DXCCS1=123";
   if dxccs1 eq 123 then influenza = 1;
   else influenza = 0;
   format HOSP_REGION st_regn.;
run;

PROC SURVEYMEANS DATA=influenza1 SUM STD MEAN STDERR ;
   VAR influenza;
   WEIGHT DISCWT ;
   CLUSTER HOSP_ED ;
   STRATA NEDS_STRATUM ;
   DOMAIN HOSP_REGION ;
run;
```

OUTPUT: Produce Regional Estimates of Discharges with DXCCS1=123 (Influenza) from 2014 NEDS File (Weighted) (example 14)

Produce Regional Estimates of Discharges with DXCCS1=123 (Influenza) from 2014 NEDS File (Weighted)

The SURVEYMEANS Procedure

Data Summary

Number of Strata	86
Number of Clusters	945
Number of Observations	31026417
Sum of Weights	137807901

Statistics

Variable	Label	Mean	Std Error of Mean	Sum	Std Error of Sum
Influenza	Influenza DXCCS1=123	0.005679	0.000133	782665	26109

Produce Regional Estimates of Discharges with DXCCS1=123 (Influenza) from 2014 NEDS File (Weighted)

The SURVEYMEANS Procedure

Domain Statistics in HOSP_REGION

Region of hospital	Variable	Label	Mean	Std Error of Mean	Sum	Std Error of Sum
1: Northeast	Influenza	Influenza DXCCS1=123	0.003402	0.000198	87131	7022.260248
2: Midwest	Influenza	Influenza DXCCS1=123	0.006321	0.000270	197325	11044
3: South	Influenza	Influenza DXCCS1=123	0.007546	0.000250	417042	21929
4: West	Influenza	Influenza DXCCS1=123	0.003156	0.000175	81166	5431.207623

CODE: Count Hospital Records with HOSP_TRAUMA>0 from 2014 NEDS HOSPITAL File (example 15)

```
Title1 'Count Hospital Records with HOSP_TRAUMA>0 from 2014 NEDS HOSPITAL
File';
libname neds2014 "C:\NEDS\2014\SASDATA";
options obs = MAX PageSize=51 LineSize=146 ;

data TRAUMA1;
   set NEDS2014.neds_2014_hospital
         (keep=HOSP_ED DISCWT NEDS_STRATUM HOSP_TRAUMA);
   Attrib Trauma length=3 label='Trauma Hospital';
   if hosp_trauma>0 then trauma = 1;
   else trauma = 0;
run;

PROC SURVEYMEANS DATA=TRAUMA1 SUM STD MEAN STDERR ;
   VAR trauma;
   CLUSTER HOSP_ED ;
   STRATA NEDS_STRATUM ;
run;
```

OUTPUT: Count Hospital Records with HOSP_TRAUMA>0 from 2014 NEDS HOSPITAL File (example 16)

```
                 Count Hospital Records with HOSP_TRAUMA>0 from 2014 NEDS HOSPITAL File

                                        The SURVEYMEANS Procedure

                                              Data Summary

                                  Number of Strata                 86
                                  Number of Clusters              945
                                  Number of Observations          945


                                                          Statistics

                                                          Std Error                          Std Error
  Variable     Label                          Mean          of Mean               Sum           of Sum
  ------------------------------------------------------------------------------------------------------
  Trauma       Trauma Hospital            0.214815                0        203.000000                0
  ------------------------------------------------------------------------------------------------------
```

CODE: Produce National Estimate of Hospitals with HOSP_TRAUMA >0 from 2014 NEDS HOSPITAL File (Weighted) (example 17)

```
Title1 'Produce National Estimate of Hospitals with HOSP_TRAUMA>0 from 2014
NEDS HOSPITAL File (Weighted)';
libname neds2014 "C:\NEDS\2014\SASDATA";
options obs = MAX PageSize=51 LineSize=146 ;

data TRAUMA1;
   set NEDS2014.neds_2014_hospital
         (keep=HOSP_ED HOSPWT NEDS_STRATUM HOSP_TRAUMA);
   Attrib Trauma length=3 label='Trauma Hospital';
   if hosp_trauma>0 then trauma = 1;
   else trauma = 0;
run;

PROC SURVEYMEANS DATA=TRAUMA1 SUM STD MEAN STDERR ;
   VAR trauma;
   WEIGHT HOSPWT;
   CLUSTER HOSP_ED ;
   STRATA NEDS_STRATUM ;
run;
```

OUTPUT: Produce National Estimate of Hospitals with HOSP_TRAUMA>0 from 2014 NEDS HOSPITAL File (Weighted) (example 18)

```
Produce National Estimate of Hospitals with HOSP_TRAUMA>0 from 2014 NEDS HOSPITAL File (Weighted)

                                    The SURVEYMEANS Procedure

                                          Data Summary

                              Number of Strata                  86
                              Number of Clusters               945
                              Number of Observations           945
                              Sum of Weights                  4594


                                           Statistics

                                                            Std Error                          Std Error
   Variable    Label                          Mean            of Mean              Sum            of Sum
   ---------------------------------------------------------------------------------------------
   Trauma      Trauma Hospital            0.208533                  0       958.000000      3.044201E-15
   ---------------------------------------------------------------------------------------------
```

CODE: Count Records with DXCCS1=56 (Cystic Fibrosis) from 2012 KID File (example 19)

```
Title1 'Count Records with DXCCS1=56 (Cystic Fibrosis) from 2012 KID File';
libname kid2012 "C:\KID\2012\SASDATA";
options obs = MAX PageSize=51 LineSize=146 ;

 data cf1;
    set KID2012.kid_2012_core (keep=HOSP_KID DISCWT DXCCS1 KID_STRATUM);
    attrib cysticf length=3 label='Cystic Fibrosis';
    if dxccs1 eq 56 then cysticf = 1;
    else cysticf = 0;
 run;

 PROC SURVEYMEANS DATA=cf1 SUM STD MEAN STDERR ;
    VAR  cysticf;
    CLUSTER HOSP_KID ;
    STRATA KID_STRATUM ;
run;
```

OUTPUT: Count Records with DXCCS1=56 (Cystic Fibrosis) from 2012 KID File (example 20)

Count Records with DXCCS1=56 (Cystic Fibrosis) from 2012 KID File

The SURVEYMEANS Procedure

Data Summary

Number of Strata	95
Number of Clusters	4179
Number of Observations	3195782

Statistics

Variable	Label	Mean	Std Error of Mean	Sum	Std Error of Sum
cysticf	Cystic Fibrosis	0.001524	0.000120	4871.000000	430.795123

CODE: Produce National Estimate of Discharges with DXCCS1=56 (Cystic Fibrosis) from 2012 KID File (Weighted) (example 21)

```
Title1 'Produce National Estimate of Discharges with DXCCS1=56 (Cystic
Fibrosis) from 2012 KID File (Weighted)';
libname kid2012 "C:\KID\2012\SASDATA";
options obs = MAX PageSize=51 LineSize=146 ;

data cf1;
   set KID2012.kid_2012_core (keep=HOSP_KID DISCWT DXCCS1 KID_STRATUM);
   attrib cysticf length=3 label='Cystic Fibrosis';
   if dxccs1 eq 56 then cysticf = 1;
   else cysticf = 0;
run;

PROC SURVEYMEANS DATA=cf1 SUM STD MEAN STDERR ;
   VAR cysticf;
   WEIGHT DISCWT;
   CLUSTER HOSP_KID ;
   STRATA KID_STRATUM ;
run;
```

OUTPUT: Produce National Estimate of Discharges with DXCCS1=56 (Cystic Fibrosis) from 2012 KID File (Weighted) (example 22)

```
  Produce National Estimate of Discharges with DXCCS1=56 (Cystic Fibrosis) from 2012 KID File
                                          (Weighted)

                                    The SURVEYMEANS Procedure

                                          Data Summary

                              Number of Strata                  95
                              Number of Clusters              4179
                              Number of Observations       3195782
                              Sum of Weights            6675221.93


                                           Statistics

                                                       Std Error                        Std Error
    Variable    Label                      Mean          of Mean             Sum           of Sum
    ---------------------------------------------------------------------------------------------
    cysticf     Cystic Fibrosis        0.001050      0.000086055     7007.542680       619.403091
    ---------------------------------------------------------------------------------------------
```

CODE: Produce Regional Estimates of Discharges with DXCCS1=56 (Cystic Fibrosis) from 2012 KID File (Weighted) (example 23)

```
Title1 'Produce Regional Estimates of Discharges with DXCCS1=56
(Cystic Fibrosis) from 2012 KID File (Weighted)';
libname kid2012 "C:\KID\2012\SASDATA";
options obs = MAX PageSize=51 LineSize=146 ;

Proc Format;
    Value St_Regn
        1 = '1: Northeast'
        2 = '2: Midwest  '
        3 = '3: South    '
        4 = '4: West     '
    ;
Run;

data cf1;
   Set KID2012.kid_2012_core
           (keep=HOSP_KID DISCWT DXCCS1 KID_STRATUM HOSP_REGION);
   attrib cysticf length=3 label='Cystic Fibrosis';
   if dxccs1 eq 56 then cysticf = 1;
   else cysticf = 0;
   format HOSP_REGION st_regn.;
run;

PROC SURVEYMEANS DATA=cf1 SUM STD MEAN STDERR ;
   VAR cysticf;
   WEIGHT DISCWT ;
   CLUSTER HOSP_KID ;
   STRATA KID_STRATUM ;
   DOMAIN HOSP_REGION ;
run;
```

OUTPUT: Produce Regional Estimates of Discharges with DXCCS1=56 (Cystic Fibrosis) from 2012 KID File (Weighted) (example 24)

Produce Regional Estimates of Discharges with DXCCS1=56 (Cystic Fibrosis) from 2012 KID File (Weighted)

The SURVEYMEANS Procedure

Data Summary

Number of Strata	95
Number of Clusters	4179
Number of Observations	3195782
Sum of Weights	6675221.93

Statistics

Variable	Label	Mean	Std Error of Mean	Sum	Std Error of Sum
cysticf	Cystic Fibrosis	0.001050	0.000086055	7007.542680	619.403091

Produce Regional Estimates of Discharges with DXCCS1=56 (Cystic Fibrosis) from 2012 KID File (Weighted)

The SURVEYMEANS Procedure

Domain Statistics in HOSP_REGION

Region of hospital	Variable	Label	Mean	Std Error of Mean	Sum	Std Error of Sum
1: Northeast	cysticf	Cystic Fibrosis	0.000998	0.000238	1126.792347	303.412050
2: Midwest	cysticf	Cystic Fibrosis	0.001194	0.000203	1732.064175	331.214915
3: South	cysticf	Cystic Fibrosis	0.000981	0.000154	2515.637383	426.164244
4: West	cysticf	Cystic Fibrosis	0.001066	0.000199	1633.048776	346.496124