```
*=============================================================================
==========*
            Program Name:     County ranking
            Location:         \\SCCHOIT40\phig\CHR\program
            Programmer:       Yunshu Li
            Date:             Apr 2016
*=============================================================================
==========*;
options nodate nonumber symbolgen mprint source2 ;
ods _all_ close;
libname data "\\scchoit40\phig\CHR\data";

%let report=\\scchoit40\phig\CHR\output\;

/*load the reference file into SAS*/
data ref;
 infile "\\scchoit40\phig\CHR\data\County Ranking reference.csv" dlm=',' dsd
firstobs=2 lrecl=4000 termstr=CRLF missover;
/* Read all variables as character and convert needed variables into Numeric
   to avoid commas in numerical data reading */
 input
      ID                        : $10.                  /* 1. Indicator ID */
      NAME                : $50.                  /* 2. Indicator Name */
      TITLE               : $150.                 /* 3. Indicator Title */
      DESC                : $300.                 /* 4. Indicator Description
*/
      SOURCE                    : $100.                 /* 5. Data Source */
      COVERAGE          : $50.              /* 6. Year Coverage */
      DEMO                : $80.                  /* 7. Demographic Variables
(Pipe delimited) */
      FOOTNOTES           : $150.                 /* 8. Footnotes (Pipe
delimited) */
      NUM                 : $30.                  /* 9. Numerator Label */
      DENO                : $30.                  /* 10. Denominator Label */
      MEASURE             : $50.                  /* 11. Measure Unit */
      DECIMAL             : $2.               /* 12. Decimal Point */
      YLABEL                    : $30.                  /* 13. Y-AXIS Label */
      LEGEND                    : $30.                  /* 14. Map Legend Title
*/
      LEVEL               : $30.                  /* 15. CATEGORIES */
      RANK                : 8.                /* 16. RANK */
      P1                        : $20.                  /* 17. PAGE NUMBER 1 */
      P2                        : $20.                  /* 18. PAGE NUMBER 2 */
      P3                        : $20.                  /* 19. PAGE NUMBER 3 */

 ;
 if missing(ID) then delete;
run;

/*Load measure information for the table of contents*/
data MEASURE;
 infile "\\scchoit40\phig\CHR\data\measure.csv" dlm=',' dsd firstobs=2
lrecl=4000 termstr=CRLF;
/* Read all variables as character and convert needed variables into Numeric
   to avoid commas in numerical data reading */
 input
      ID                        : $10.                  /* 1. Indicator ID */
```

```
      Measure                  : $50.                  /* 2. Indicator Name */
      Description       : $1000.          /* 3. Indicator Description */
      SOURCE                   : $100.                 /* 4. Data Source */
      YEARS          : $50.                /* 5. Year Coverage */
      LEVEL                    : $80.                  /* 6. Demographic
Variables (COMMA delimited) */
 ;
 if missing(ID) then delete;
run;

/*Load suppression rules for the data source into SAS*/
data sup;
 infile "\\scchoit40\phig\CHR\data\sup.csv" dlm=',' dsd firstobs=2 lrecl=4000
termstr=CRLF;
/* Read all variables as character and convert needed variables into Numeric
   to avoid commas in numerical data reading */
 input
      SOURCE                   : $100.                 /* 1. Data Source */
      Criteria         : $100.             /* 2. Suppression Criteria */
 ;
run;

/*Create macro variables for the varaibels in reference file -- duplicated to
next step*/
proc sql noprint;
      select id, %quote(title), %quote(name), %quote(desc), %quote(source),
%NRQUOTE(COVERAGE),%bquote(demo),
                  %quote(footnotes),%quote(num), %quote(deno),
%quote(measure), decimal, %quote(YLABEL),%quote(LEGEND),count(*)
                  into :id separated by "@", :titl separated by "@",
                  :name separated by "@", :desc separated by "@",
                  :source separated by "@", :cover separated by "@",
                  :demo separated by "@", :foot separated by "@",
                  :num separated by "@",:deno separated by "@",
                  :unit separated by "@", :deci  separated by "@",
                  :ylab separated by "@", :leg separated by "@",
                  :number
      from ref;
quit;


/*Create formats for the varaibels in reference file*/

proc sql;
 create table formats1 as
      select distinct fmtname, start, start as end, label, type from
  (
      (select 'TITLE' as fmtname length=30, ID as start length=30, TITLE as
label length=200, 'C' as type from ref)
      union all
      (select 'DESC' as fmtname length=30, ID as start length=30, DESC as
label length=200, 'C' as type from ref)
      union all
      (select 'COVERAGE' as fmtname length=30, ID as start length=30,
COVERAGE as label length=200, 'C' as type from ref)
      union all
```

```
      (select 'NAME' as fmtname length=30, ID as start length=30, NAME as
label length=200, 'C' as type from ref)
      union all
      (select 'SOURCE' as fmtname length=30, ID as start length=30, SOURCE as
label length=200, 'C' as type from ref)
      union all
      (select 'NUM' as fmtname length=30, ID as start length=30, NUM as label
length=200, 'C' as type from ref)
      union all
      (select 'DENO' as fmtname length=30, ID as start length=30, DENO as
label length=200, 'C' as type from ref)
      union all
      (select 'FOOTNOTES' as fmtname length=30, ID as start length=30,
FOOTNOTES as label length=200, 'C' as type from ref)
      union all
      (select 'MEASURE' as fmtname length=30, ID as start length=30, MEASURE
as label length=200, 'C' as type from ref)
      union all
      (select 'DECIMAL' as fmtname length=30, ID as start length=30, DECIMAL
as label length=200, 'C' as type from ref)
      union all
      (select 'YLABEL' as fmtname length=30, ID as start length=30, YLABEL as
label length=200, 'C' as type from ref)
      union all
      (select 'LEGEND' as fmtname length=30, ID as start length=30, LEGEND as
label length=200, 'C' as type from ref)
)
;
quit;

data formats;
      set formats1 data.pa_formats_2;
run;

proc format cntlin=formats;
run;

proc format;
value cos2hsa
      28,47,101                                  =  1
      58-62,102                                  =  2
      13,33,37,39,48,51,55,103          =  3
      1,10,19,38,41,42,104                =  4
      17,21,27,36,43,105                  =  5
      9,15,16,20,52,53,106                =  6
      22,23,40,107                        =  7
      5,11,25,30,31,35,108                =  8
      3,8,12,49,50,109                    =  9
      7,24,26,32,44,45,46,54,57,110     =  10
    2,4,6,14,18,29,34,56,111          =  11
    888,999                          =  20
      ;
value hsa
     1  = "Long Island"
     2  = "New York City"
     3  = "Mid-Hudson"
     4  = "Capital Region"
```

```
      5  = "Mohawk Valley"
      6  = "North Country"
      7  = "Tug Hill Seaway"
      8  = "Central NY"
      9  = "Southern Tier"
      10 = "Finger Lakes"
      11 = "Western NY"
        20 = "New York State"
      ;
run;

/*Reformat the mast dataset*/
data masterfile;
length Strata_value $35 County $35 group $10 id $8 ;
format Strata_value County $35.;
set data.masterfile_suppressed;
rate=round(rate_suppressed*1,0.01);
num=numerator_suppressed*1;
tot=denominator*1;
if strata_value='NYC' then strata_value='New York City';
if strata_value='NYS' then strata_value='New York State';
if strata_value='ROS' then strata_value='New York State (excluding NYC)';
if county='NYC' then county='New York City';
if county='NYS' then county='New York State';
if county='ROS' then county='New York State (excluding NYC)';
cos=input(put(county,$name2cos.),best.);
fips=input(put(cos,cos2fips.),best.);
if strata in ('Region' 'State' 'DSRIP Region') then group='Total';
else if strata in ('ZIP Code') then group='ZIP';
else if strata in ('County') then group='County';
else group='Demo';
/*if indicator='Premature death' then id='ID1';*/
/*else if indicator='Poor Mental Health' then id='ID2';*/
/*else if indicator='Low birthweight' then id='ID3';*/
/*else if indicator='Adult Smoking' then id='ID4';*/
/*else if indicator='Adult Obesity' then id='ID5';*/
/*else if indicator='Food Insecurity' then id='ID6';*/
/*else if indicator='Excessive Drinking' then id='ID7';*/
/*else if indicator='Teen pregnancies' then id='ID8';*/
/*else if indicator='Preventable hospital stays' then id='ID9';*/
/*else if indicator='Injury deaths' then id='ID10';*/
/*else if indicator='Housing Insecurity' then id='ID11';*/
/*if strata="DSRIP Region" then delete;*/
run;

%include "\\scchoit40\phig\CHR\program\chrmacros.sas";

%macro cnty;

/*update output style*/
proc template;
 define style styles.mylisting;
  parent=styles.listing;
   style PageNo from TitlesAndFooters /
            pretext = "--"
            posttext = "--"
            cellpadding=0
```

```
            cellspacing=0
            foreground=white;
end;
run;

%quant

/*create subset for each county*/
%do cos=1 %to 62;
data cnty&cos.;
      set masterfile;
      where cos=&cos or group='Total';
run;

%let county=%sysfunc(putn(&cos,cos2name.));
%let hsa=%sysfunc(putn(%sysfunc(putn(&cos,cos2hsa.)),hsa.));


options orientation=portrait nonumber topmargin=0.2in bottommargin=0.2in
leftmargin=0.2in rightmargin=0.2in;

ods listing close;
/*ods pdf pdftoc = 1 file="&report.&county..pdf";*/
ods pdf pdftoc = 1
file="\\CCHOIT097070\website\statistics\chac\chr\&county..pdf";

ods escapechar="~";

%let dft=~S={font=('Helvetica',11pt) color=black};

ods pdf style=journal ;
%cover
%contents

options pageno=1;

%intro

ods pdf nogfootnote style=styles.mylisting;


      %do i=1 %to &number;
/*    %do i=8 %to 8;*/
            %let ind=%sysfunc(trim(%qscan(%bquote(&id), &i,%str(@))));
            %let title=%qscan(%bquote(&titl), &i,%str(@));
            %let tt=%qscan(%bquote(&name), &i,%str(@));
            %let un=%qscan(%bquote(&unit), &i,%str(@));
            %let decimal=%sysfunc(compress(%qscan(%bquote(&deci),
&i,%str(@))));
            %let nt=%qscan(%bquote(&num), &i,%str(@));
            %let dt=%qscan(%bquote(&deno), &i,%str(@));
            %let crg=%qscan(%bquote(&cover), &i,%str(@));
            %let fn1=%qscan(%qscan(%bquote(&foot), &i,%str(@)),1,%str(|));
            %if %qscan(%bquote(&demo), &i,%str(@)) ne No %then
            %let fn2=%qscan(%qscan(%bquote(&foot), &i,%str(@)),2,%str(|));
            %let sc=%qscan(%bquote(&source), &i,%str(@));
            %let ds=%qscan(%bquote(&desc), &i,%str(@));
```

```
            %let yaxis=%qscan(%bquote(&YLAB), &i,%str(@));
            %let legd=%qscan(%bquote(&leg), &i,%str(@));

/*Create suppression format in data visulization*/
            proc format;
                  value rate
                  .="s"
                  other=[comma12.&decimal.];
                  value raten
                  .="s"
                  other=[comma12.];
            run;

            proc format cntlin=zipform(where=(id="&ind")); run;

            data rpt_cnty&cos.;
                  set cnty&cos.;
                  where id = "&ind";
                  if lower_CL ^=. then ci='('||trim(left(lower_CL))||' -
'||trim(left(upper_CL))||')';
                  else ci=.;
                  cvalue=strata;
                  format num tot rate rate.;
            run;

            proc sort data=rpt_cnty&cos.; by cos; run;

/*    Create data table for bar chart*/
            data bartab;
                  set rpt_cnty&cos.;
                  where group in ('Demo', 'County','Total');
                  if cvalue='DSRIP Region' and county ^= "&hsa" then delete;
                  if cos=102 and &cos not in (58,59,60,61,62) then delete;
                  else if cos=888 and &cos in (58,59,60,61,62) then delete;
                  if group ^='Demo' then strata='Total';
                  stratax=strata;
                  if stratax="Medicaid Status" then stratax="Medicaid";
                  if unstable ^=' ' then ratex=trim(put(rate*1,
rate.))||left(trim(unstable));
                  else ratex=put(rate*1, rate.);
                  if rate=. then rsp_rate=0.0001;
                  else rsp_rate=rate;
            run;

/*Create dataset for zip code map*/
            %if %qscan(%bquote(&demo), &i,%str(@)) ne No %then %do;
            data ziptab;
                  set rpt_cnty&cos.;
                  where group in ('ZIP', 'County','Total');
                  if cvalue='DSRIP Region' and county ^= "&hsa" then delete;
                  if cos=102 and &cos not in (58,59,60,61,62) then delete;
                  else if cos=888 and &cos in (58,59,60,61,62) then delete;
                  if group ='County' then group='Total';
                  if group='ZIP' then group='ZIP code';
                  zip=input(Strata_value, best.);
                  if zip=. then zip=cos;
                  if group='ZIP code' then rank=1;
```

```
                  else rank=2;
                  if unstable ^=' ' then ratex=trim(put(rate*1,
rate.))||left(trim(unstable));
                  else ratex=put(rate*1, rate.);
                  if zip=&cos then call symput ('rate',trim(left(ratex)));
                  if zip=999 then call symput ('state',trim(left(ratex)));
                  if strata='Region' then call symput
('strate',trim(left(ratex)));
            run;

            proc sort data=ziptab; by rank zip; run;

            %global c1 c2 c3 c4 pat pnum sum_datanum region form ex;

            %bartab
            %mapdata
            %if &cos=3 or &cos=5 or &cos=13 or &cos=31 or &cos=35 or &cos=36
or &cos=45 or &cos=53 or &cos=55 or &cos=60
                  %then %do;
            %mapp
            %end;
            %else %if &cos=14
                  %then %do;
            %mape
            %end;
            %else %if &cos=21
                  %then %do;
            %maph
            %end;
            %else %do;
            %mapl
            %end;
            %ziptab
            %end;
            %else %do;
            %ebrfss
            %end;

      %end;

options nonumber;
ods pdf style=journal;
%meth
%ack

ods _all_ close;
ods listing;

%end;

%mend;

%cnty
```