



Appendices

Examining Changes Across Years Using HINTS 2003 and 2005 Data May 2007

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The SAS-callable SUDAAN examples work with SUDAAN 9.1 and later.

Appendix A (Creating a Combined 2003 and 2005 Data File)

This first syntax creates the combined data file using the following variables:

- 1) CD07InternetForCancer (Outcome—modified from HC-29 (2003) and CA-15 (2005))
- 2) Hints year (Survey iteration, 2003 or 2005)
- 3) Age group (5 levels)
- 4) Education (4 levels)
- 5) Gender
- 6) Income (4 levels)
- 7) Race ethnicity (Race/ethnicity-4 levels)
- 8) nfwgt (Full sample weight)
- 9) nfwgt1-nfwgt100 (100 replicate weights)

```
proc format;
  value yearf
    1="2003"
    2="2005"
    ;
  value yesnor
    0="No"
    1="Yes"
    ;
  value incomef
    1="<$25K"
    2="$25K-<$50K"
    3="$50K-<$75K"
    4="$75K+"
    ;
```

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```
if educA in (7,8,9) then educA=.;

label income="Annual Household Income";
select(hhincB);
when(1)           income=1;**<$25K;
when(2,3)         income=2;**$25K-<$50K;
when(4,5)         income=hhincB-1;**$50K-<$75K,$75K+;
otherwise;
end;
format income incomef.;

label ageGroup="Age Group";
if AgeGrpB in (1,2,3,4) then ageGroup=AgeGrpB;
else if 75 le spage le 79 then agegroup=4;**65-79;
else if 80 le spage le 996 then agegroup=5;**80+;
format ageGroup ageGroup.;

label raceEthnicity="Race/Ethnicity";
if raceEthn in (2,3) then raceEthnicity=raceEthn-1;
else if raceEthn=1 then raceEthnicity=3;**Hispanic;
else if raceEthn in (4,5,6,7) then raceEthnicity=4;**NH Other;
format raceEthnicity raceethf.;

***Response Variable***;
label CD07InternetForCancer="Have you specifically looked for cancer
info online (All Respondents)?";
if hintsyear=1 then do;**2003;
/*Did not Seek Cancer Info, Does not use internet, Does not use
internet for health information*/
if HC9SeekCancerInfo=2 or HC20UseInternet=2 or
HC27LastOnlineHealth=5 then CD07InternetForCancer=0;**No;
/*Responses from HC29*/
else if HC29InternetForCancer=1 then
CD07InternetForCancer=1;**Yes;
else if HC29InternetForCancer=2 then
CD07InternetForCancer=0;**No;
end;
else if hintsyear=2 then do;**2005;
/*Last search for cancer info on internet*/
if CA12WhereLookCancerInfo=7 then CD07InternetForCancer=1;**Yes;
/*Did not Seek Cancer Info, Does not use internet*/
else if CA08SeekCancerInfo=2 or GA1UseInternet=2 then
CD07InternetForCancer=0;**No;
/*Responses from CA15*/
else if CA15InternetForCancer=1 then
CD07InternetForCancer=1;**Yes;
else if CA15InternetForCancer=2 then
CD07InternetForCancer=0;**No;
end;
format CD07InternetForCancer yesnor.;

***Adjust Replicate Weights***;
***Set new weight variables for the combined dataset;
array origwgts[50] fwgt1-fwgt50;
array newwgts[100] nfwgt1-nfwgt100;
```

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```
nfwgt=fwgt;
do i = 1 to 50;
  if hintsyear=1 then do;***2003;
    newwgts[i]      = origwgts[i];
    newwgts[i+50]   = fwgt;
    end;
  else if hintsyear=2 then do;***2005;
    newwgts[i]      = fwgt;
    newwgts[i+50]   = origwgts[i];
    end;
  end;
drop fwgt--fwgt50 i;

label nfwgt="Final full-sample weight";
attrib nfwgt1-nfwgt100 label="Final sample replicate weight";

run;

data combined;
  set combined(keep=education ageGroup income gender raceEthnicity
CD07InternetForCancer nfwgt nfwgt1-nfwgt100
            hintsyear);
run;
```

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Appendix B (Design Statements Utilized for a Combined Data File)

/*The following design statement can be used with SUDAAN when utilizing a combined 2003 and 2005 dataset*/

```
proc procedurename data=combined design=jackknife;
weight nfwgt;
jackwgts nfwgt1-nfwgt100 /adjjack=.98;
```

Appendix C (Estimating Change Using the Combined Dataset)

/*This syntax was used to test for differences across HINTS years using combined dataset*/

```
proc descript data=combined design=jackknife;
weight nfwgt;
jackwgts nfwgt1-nfwgt100 /adjjack=.98;
class hintsyear cd07internetforcancer _one_ /nofreq;
var cd07internetforcancer;
catlevel 1;
tables _one_;
diffvar hintsyear=(2 1)/name="Change from 2003 to 2005";
print nsum percent sepercent lowpct uppct t_pct p_pct/style=nchs;
run;
```

/*This syntax was used to test for differences across years for a subset of demographic variables using combined dataset*/

```
proc descript data= combined design=jackknife;
weight nfwgt;
jackwgts nfwgt1-nfwgt100 /adjjack=.98;
class hintsyear agegroup education gender income raceethnicity
cd07internetforcancer/nofreq;
var cd07internetforcancer;
catlevel 1;
diffvar hintsyear=(2 1)/name="Change from 2003 to 2005 By Demographic
Subgroup";
tables agegroup education gender income raceethnicity;
print nsum percent sepercent lowpct uppct t_pct p_pct/style=nchs;
run;
```

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Appendix D (Estimating Change Controlling for Covariates)

/*This syntax assesses for differences across years while controlling for covariates—education, age and gender using combined dataset*/

```
proc rlogist data=combined design=jackknife;
weight nfwgt;
jackwgts nfwgt1-nfwgt100 /adjjack=.98;
class hintsyear education agegroup gender/nofreq;
model cd07internetforcancer=hintsyear education agegroup gender;
reflev hintsyear=1;
run;
```

/*This syntax assesses for differences across years while controlling for covariates—education, age and gender using combined dataset. It also includes an interaction term to test for differential change of levels of education*/

```
proc rlogist data= combined design=jackknife;
weight nfwgt;
jackwgts nfwgt1-nfwgt100 /adjjack=.98;
class hintsyear education agegroup gender/nofreq;
model cd07internetforcancer=hintsyear education agegroup gender
hintsyear*education;
reflev hintsyear=1;
run;
```

/*This syntax assesses for differences across years for each level of education while controlling for age and gender; note subpopn statement that delineates testing at each level of education.*/

```
proc rlogist data= combined design=jackknife;
weight nfwgt;
jackwgts nfwgt1-nfwgt100 /adjjack=.98;
subpopn education=1; /*Less than High School*/
class hintsyear agegroup gender/nofreq;
model cd07internetforcancer=hintsyear agegroup gender;
reflev hintsyear=1;
run;
```

```
proc rlogist data= combined design=jackknife;
weight nfwgt;
jackwgts nfwgt1-nfwgt100 /adjjack=.98;
subpopn education=2; /*High School Graduates*/
class hintsyear agegroup gender/nofreq;
model cd07internetforcancer=hintsyear agegroup gender;
reflev hintsyear=1;
run;
```

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```
proc rlogist data= combined design=jackknife;
weight nfwgt;
jackwgts nfwgt1-nfwgt100 /adjjack=.98;
subpopn education=3; /*Some College*/
class hintsyear agegroup gender/nofreq;
model cd07internetforcancer=hintsyear agegroup gender;
reflev hintsyear=1;
run;

proc rlogist data= combined design=jackknife;
weight nfwgt;
jackwgts nfwgt1-nfwgt100 /adjjack=.98;
subpopn education=4; /*College Graduate or More*/
class hintsyear agegroup gender/nofreq;
model cd07internetforcancer=hintsyear agegroup gender;
reflev hintsyear=1;
run;
```

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Appendix E (Estimating Means for Multiple Years)

/*This syntax is used to obtain weighted means across years of HINTS using combined dataset*/

```
proc descript data= combined design=jackknife;
weight nfwgt;
jackwgts nfwgt1-nfwgt100 /adjjack=.98;
var cd07internetforcancer;
catlevel 1;
print nsum percent lowpct uppct/style=nchs;
run;
```

/*This syntax is used to obtain weighted means across years of HINTS by demographic subgroup using combined dataset*/

```
proc descript data= combined design=jackknife;
weight nfwgt;
jackwgts nfwgt1-nfwgt100 /adjjack=.98;
class hintsyear agegroup education gender income raceethnicity
cd07internetforcancer/nofreq;
var cd07internetforcancer;
catlevel 1;
tables agegroup education gender income raceethnicity;
print nsum percent lowpct uppct/style=nchs;
run;
```