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* IVEware Analysis Examples Replication for ASDA 3rd Edition
* Berglund Winter 2025
* Chapter 11 ;
```

```
libname d "P:\ASDA3\Data Sets for Analysis Examples and Stata R Code" ;
```

```
ods listing ;
ods graphics off ;
options nodate nonumber ls=125 ps=68 ;
```

```
*set options and location to call IVEware from SAS session ;
options set=srclib "E:\live 11feb24\sas" sasautos=('!srclib' sasautos) maautosource ;
```

```
data c11_hrs ;
  set d.cc_1wave ;
/* these variables are already created in SAS
  if kfinr=1 and kwgtr ne 0 ;
* prepare ln income ;
ln_inc06 = log(H8ITOT + 1);
ln_inc08 = log(H9ITOT + 1);
ln_inc10 = log(H10ITOT + 1);
ln_inc12 = log(H11ITOT + 1);
*/
run ;
```

```
ods rtf style=normalprinter bodytitle file="P:\ASDA3\Replication IVEware\Chapter 11\Analysis Example Replication ASDA3
IVE C11 Code and Results.rtf" ;
```

```
ods text="Histograms of Log Income Variables not available in IVEware" ;
```

```
*****;
```

```
* Single Wave ;
%describe (setup=new, name="Example 11.3.1" , dir=P:\ASDA3\Replication IVEware\Chapter 11) ;
  title "11.3.1 Example: Descriptive Estimation at a Single Wave, CCASE Analysis, Table 11.2" ;
  datain c11_hrs ;
  stratum stratum ; cluster secu ; weight kwgtr ;
  mean ln_inc08 ;
run;
```

```
* Note: IVEware does not permit output data set from the DESCRIBE command so we use SAS to do the job with the exp
function ;
```

```
* From IVEware:
```

Mean	SE
10.44068	0.02629565
Lower	Upper
Bound	Bound
10.388	10.49336 ;

```
data _null_ ;
  mean=exp(10.44068) ;
  lcl=exp(10.388) ;
  ucl=exp(10.49336) ;
  put mean= lcl= ucl= ;
run ;
```

```
ods text="mean=34223.916791 lcl=32467.666624 ucl=36075.166535" ;
```

```
*****
*****;
```

```
* "Single Wave: Weight adjustment approach for 2008 log-income. Compute response indicator for 2008." ;
```

```
data c11_hrs_wgt_adj ;
  set c11_hrs ;
  * response in 2008 indicator ;
  if ln_inc08 ne . then resp08=1 ; else resp08=0 ;
```

```

* Modal imputation of missing covariate values. ;
if selfrhealth_06 = . then selfrhealth_06 = 3 ;
if marcat_06=. then marcat_06 = 2 ;
if diabetes_06=. then diabetes_06 = 0 ;
if arthritis_06=. then arthritis_06 = 1 ;
if racecat = . then racecat=2 ;
if edcat = . then edcat=2 ;
run ;
* Note: IVEware can provide an output data set from REGRESS command but it will include only variables such as
predicted value but not additional variables in data set, therefore use SAS for data management/procedures up to the
Mean Income using Adjusted Weight;

* "Logistic Regression with Response in 2008 as Outcome: Weight Adjustment Method for 2008" ;
proc surveylogistic data=c11_hrs_wgt_adj ;
  strata stratum ; cluster secu ; weight kwgtr ;
  class selfrhealth_06 (ref=first) marcat_06 (ref=first) racecat (ref=first) edcat (ref=first) / param=ref ;
  model resp08 (event='1') = ln_inc06 selfrhealth_06 age_06 marcat_06 diabetes_06 arthritis_06 racecat edcat ;
  output out=outp p=phat ;
run ;
proc rank data=outp groups=10 ties=mean out=outp_deciles ;
  var phat ;
  ranks dec ;
run ;
proc sort ;
  by dec phat ;
run ;

* mean of phat by deciles ;
proc sql ;
  create table outp_deciles_1
  as select *, mean(phat) as mean_phat
  from outp_deciles
  group by dec ;

* "Mean of Phat by Deciles" ;
proc means n mean data=outp_deciles_1 ;
  class dec ; var mean_phat ;
run ;

* Create adjusted weight ;
data outp_deciles_2 ;
  set outp_deciles_1 ;
  adj_kwgtr = kwgtr*(1/mean_phat) ;
run ;

%describe (setup=new, name="Example 11.3.1 Single Wave Weight Adjust", dir=P:\ASDA3\Replication Iware\Chapter 11) ;
  title 11.3.1 Example: Descriptive Estimation at a Single Wave, Wgt Adjustment, Table 11.2 ;
  datain outp_deciles_2 ;
  stratum stratum ; cluster secu ; weight adj_kwgtr ;
  mean ln_inc08 ;
run;

* Note: IVEware does not permit output data set from the DESCRIBE command so we use SAS to do the job
with the exp function ;
* From IVEware:

```

	Weighted Mean	Standard Error
ln_inc08	10.41358	0.02661132
	Lower Bound	Upper Bound
	10.36027	10.46689

```

;

```

```

data _null_ ;
  mean=exp(10.41358 ) ;
  lcl=exp(10.36027) ;
  ucl=exp(10.46689) ;
put mean= lcl= ucl= ;
run ;

ods text="mean=33308.90308 lcl=31579.706692 ucl=35132.784329" ;

*****;
* "Single Wave: Multiple Imputation method." ;

* Create deciles of the 2006 sampling weights. ;
proc rank data=c11_hrs groups=10 ties=low out=wt_deciles ;
  var kwgtr ;
  ranks kwgtr_dec ;
run ;

* use modal values for all variables except log income 2008 ;
data wt_deciles_1 ;
  set wt_deciles ;
  * Modal imputation of missing covariate values. ;
  if selfrhealth_06 = . then selfrhealth_06 = 3 ;
  if marcat_06=. then marcat_06 = 2 ;
  if diabetes_06=. then diabetes_06 = 0 ;
  if arthritis_06=. then arthritis_06 = 1 ;
  if racecat = . then racecat=2 ;
  if edcat = . then edcat=2 ;
* keep variables needed for imputation and analysis ;
keep kwgtr hhid pn ln_inc08 ln_inc06 selfrhealth_06 age_06 marcat_06 diabetes_06 arthritis_06 racecat edcat stratum
kwgtr_dec secu ;
run ;

* "Means of all Variables Included in Imputation" ;
proc means n nmiss mean min max data=wt_deciles_1 ;
  var ln_inc08 ln_inc06 selfrhealth_06 age_06 marcat_06 diabetes_06 arthritis_06 racecat edcat stratum kwgtr_dec ;
run ;

* Use IMPUTE module for imputation and analysis of imputed data sets in IVEware ;
%impute (setup=new, name="Example 11.3.1 Single Wave Multiple Imputation", dir=P:\ASDA3\Replication Iveware\Chapter 11)
;
  title 11.3.1 Example: Descriptive Estimation at a Single Wave, MI, Table 11.2 ;
  datain wt_deciles_1 ;
  dataout outimp1 all ;
  default continuous ;
  transfer hhid pn secu kwgtr ;
  categorical selfrhealth_06 marcat_06 racecat edcat stratum kwgtr_dec ;
  multiples 5 ;
  seed 41279 ;
  iterations 5 ;
run;

* Use DESCRIBE to analyze and combine results from 5 imputed data sets ;
%describe (setup=new, name="Example 11.3.1 Single Wave MI", dir=P:\ASDA3\Replication Iveware\Chapter 11) ;
  title 11.3.1 Example: Descriptive Estimation at a Single Wave, MI, Table 11.2 ;
  datain outimp1 ;
  stratum stratum ; cluster secu ; weight kwgtr ;
  mean ln_inc08 ;
run;

* Transform Log ;
* Mean 10.4158
  Lower          Upper
  Bound          Bound
  10.36491      10.46669 ;

```

```

data _null_ ;
  mean=exp(10.4158 ) ;
  lcl=exp(10.36491) ;
  ucl=exp(10.46669) ;
put mean= lcl= ucl= ;
run ;

ods text="mean=33382.930986 lcl=31726.577007 ucl=35125.758475" ;

ods text=" Imputation Using a Selection Model Not Available in IVEware" ;

*****;
* Change over 2 Waves ;
* "11.3.2 Example: Change across Two Waves. 1. Complete Case Analysis." ;

* prepare data set from wide file ;
data c11_hrs_2waves ;
  set d.hrswide ;
  if kfinr=1 and kwgtr ne 0 ;

  * prepare ln income ;
  ln_inc06 = log(H8ITOT + 1);
  ln_inc08 = log(H9ITOT + 1);
  ln_inc10 = log(H10ITOT + 1);
  ln_inc12 = log(H11ITOT + 1);
  incdiff_06_10=h10itot-h8itot ;

  * response in 2010 for weight adjustment ;
  resp10=0 ;
  if ln_inc10 ne . then resp10=1 ;

  * Modal imputation of missing covariate values. ;
  if selfrhealth_06 = . then selfrhealth_06 = 3 ;
  if marcat_06=. then marcat_06 = 2 ;
  if diabetes_06=. then diabetes_06 = 0 ;
  if arthritis_06=. then arthritis_06 = 1 ;
  if racecat = . then racecat=2 ;
  if edcat = . then edcat=2 ;
run ;

%describe (setup=new, name="Example 11.3.2" , dir=P:\ASDA3\Replication Ivieware\Chapter 11) ;
  title "11.3.2 Example: Descriptive Estimation of Change over 2 Waves, CC Analysis, Table 11.3" ;
  datain c11_hrs_2waves ;
  stratum stratum ; cluster secu ; weight kwgtr ;
  mean incdiff_06_10 ;
run;

* 2. Weight Adjustment.
* Table of response in 2010 ;
* Note: use SAS for data management and preliminary analysis ;

* "Response in 2010" ;
proc freq data=c11_hrs_2waves ;
  tables resp10 / missing ;
run ;

* "Logistic Regression with Response in 2010 as Outcome: Weight Adjustment Method for 2010" ;
proc surveylogistic data=c11_hrs_2waves ;
  strata stratum ; cluster secu ; weight kwgtr ;
  class selfrhealth_06 (ref=first) marcat_06 (ref=first) racecat (ref=first) edcat (ref=first) / param=ref ;
  model resp10 (event='1') = ln_inc06 selfrhealth_06 age_06 marcat_06 diabetes_06 arthritis_06 racecat edcat ;
  output out=outp1 p=phat1 ;

```

```

run ;

* ranks for phat using ties=low option ;
proc rank data=outp1 groups=10 ties=low out=outp_deciles ;
  var phat1 ;
  ranks dec ;
run ;

proc sort ;
  by dec phat1 ;
run ;

* mean of phat by deciles ;
proc sql ;
  create table outp_deciles_1
  as select *, mean(phat1) as mean_phat
  from outp_deciles
  group by dec ;

* create an adjusted weight ;
data outp_deciles_2 ;
  set outp_deciles_1 ;
  adj_kwgtr = kwgtr*(1/mean_phat) ;
run ;

%describe (setup=new, name="Example 11.3.2" , dir=P:\ASDA3\Replication Ivwere\Chapter 11) ;
  title "11.3.2 Example: Descriptive Estimation of Change over 2 Waves, Adj. Wgt, Table 11.3" ;
  datain outp_deciles_2 ;
  stratum stratum ; cluster secu ; weight adj_kwgtr ;
  mean incdiff_06_10 ;
run;

*****
;
* 3. Multiple Imputation.
* Multiple imputation of 2010 log-income.

* Create deciles of the 2006 sampling weights. (already done in above data step) ;
proc rank data=c11_hrs groups=10 ties=low out=wt_deciles ;
  var kwgtr ;
  ranks kwgtr_dec ;
run ;

* use modal values for all variables except log income 2010 ;
data wt_deciles_1 ;
  set wt_deciles ;

  * Modal imputation of missing covariate values. ;
  if selfrhealth_06 = . then selfrhealth_06 = 3 ;
  if marcat_06=. then marcat_06 = 2 ;
  if diabetes_06=. then diabetes_06 = 0 ;
  if arthritis_06=. then arthritis_06 = 1 ;
  if racecat = . then racecat=2 ;
  if edcat = . then edcat=2 ;
  incdiff_06_10=h10itot-h8itot ;

* keep variables needed for imputation and analysis ;
keep kwgtr hhid pn ln_inc10 ln_inc06 selfrhealth_06 age_06 marcat_06 diabetes_06 arthritis_06 racecat edcat stratum
kwgtr_dec secu ;
run ;

* "Means of all Variables Included in Imputation" ;
proc means n nmiss mean min max data=wt_deciles_1 ;
run ;

```

```

* Use IMPUTE module for imputation and pooled analysis of imputed data sets in IVEware ;
%impute (setup=new, name="Example 11.3.2 2 Waves Multiple Imputation", dir=P:\ASDA3\Replication Iveware\Chapter 11) ;
  title 11.3.2 Example: Descriptive Estimation at 2 Waves, MI, Table 11.3 ;
  datain wt_deciles_1 ;
  dataout outimp1a all ;
  default continuous ;
  transfer hhid pn secu kwgtr ;
  categorical selfrhealth_06 marcat_06 racecat edcat stratum kwgtr_dec ;
  multiples 5 ;
  seed 41279 ;
  iterations 5 ;
run;

* Compute bounded change scores in each imputed data set;
data outimp2 ;
  set outimp1a ;
  * set upper and lower bounds for log income 2010 and difference of 2010 and 2006 ;
  if ln_inc10 > 14.92 then ln_inc10=14.92 ;
  new_chg0610=exp(ln_inc10) - exp(ln_inc06) ;
  if new_chg0610 < -12300000 then new_chg0610 = -12300000 ;
  if new_chg0610 > 2062968 then new_chg0610 = 2062968 ;
run ;

%describe (setup=new, name="Example 11.3.2", dir=P:\ASDA3\Replication Iveware\Chapter 11) ;
  title "11.3.2 Example: Descriptive Estimation of Change over 2 Waves, MI Method, Table 11.3" ;
  datain outimp2 ;
  stratum stratum ; cluster secu ; weight kwgtr ;
  mean new_chg0610 ;
run;

*****
;
*4. Calibration. ;
data cal ;
  set d.hrswide ;
  if kfinr=1 and kwgtr ne 0 ;
  * Modal imputation of missing covariate values. Note that gender has no missing data. ;
  if racecat =. then racecat=2 ;
  if edcat=. then edcat=2 ;
run ;

* "4. Calibration: Cross-Class distributions " ;
proc freq data=cal ;
  tables racecat*edcat*gender /list ;
run ;

* Compute sums of 2006 weights in cross-classes
* defined by sex, race, and education. ;
title2 "Sum of KWGTR by cross-classes" ;
proc means sum nmiss mean data=cal ;
  class racecat edcat gender ;
  var kwgtr ;
  output out=cal_pop_sizes (where=( _type_=7)) sum=popsizes ;
run ;

* 32 cross classes with sums of weight kwgtr ;
proc print data=cal_pop_sizes ;
run ;

* "Repeat process for cases with complete data." ;
data complete ;
  set d.hrswide ;
  if kfinr=1 and kwgtr ne 0 ;
  * Modal imputation of missing covariate values.;

```

```

if racecat =. then racecat=2 ;
if edcat=. then edcat=2 ;
ln_inc10=log(h10itot + 1) ;
if ln_inc10 ne . then resp10=1 ;
    else if ln_inc10 eq . then resp10=0 ;
if resp10=1 ;
run ;

* Compute sums of 2006 weights among those that responded in 2010 and in cross-classes defined by sex, race, and
education;
proc means sum nmiss mean data=complete ;
    class racecat edcat gender ;
    var kwgtr ;
    output out=cal_resp_sizes (where=(type=7)) sum=sumrespwgts ;
run ;

* 32 cross classes with sums of weight kwgtr ;
proc print data=cal_resp_sizes ;
run ;

* Merge the two data sets of estimated population sizes.;
proc sort data=cal_pop_sizes ; by racecat edcat gender ; run ;
proc sort data=cal_resp_sizes ; by racecat edcat gender ; run ;

data cal_resp_pop_sizes ;
    merge cal_pop_sizes cal_resp_sizes ;
    by racecat edcat gender ;
    * create cal_adj ;
    cal_adj=popsiz/sumrespwgts ;
run ;

data cal_1 ;
    set d.hrswide ;
    if kfinr=1 and kwgtr ne 0 ;
    * Modal imputation of missing covariate values.;
    if racecat =. then racecat=2 ;
    if edcat=. then edcat=2 ;
    ln_inc06=log(h8itot + 1) ;
    ln_inc10=log(h10itot + 1) ;
run ;
proc sort ;
    by racecat edcat gender ;
run ;

* merge cal_1 and cal_resp_pop_sizes ;
data cal_cal_resp_pop_sizes ;
    merge cal_1 (in=cal) cal_resp_pop_sizes ;
    by racecat edcat gender ;
    if cal=1 ; * maintain the larger n of 11,789 ;
    * response indicator for 2010 ;
    if ln_inc10 ne . then resp10=1 ; else if ln_inc10=. then resp10=0 ;

    * calibrated weights for those with complete data ;
    if resp10=1 then kwgtr_cal= kwgtr*cal_adj ;
    incdiff_06_10=h10itot - h8itot ;
run ;

* Verify that sums of calibrated weights for cases with complete data are equal to sums of base weights for full
sample. ;
title2 "Sums of Kwgtr by race, education, gender" ;
proc means sum ;
    class racecat edcat gender ;
    var kwgtr ;
run ;

```

```

title2 "Kwgtr_cal should match Kwgtr among respondents" ;
proc means sum ;
  class racecat edcat gender ;
  var kwgtr_cal ;
  where resp10=1 ;
run ;
title2 ;

* use IVEware for final estimation ;
%describe (setup=new, name="Example 11.3.2" , dir=P:\ASDA3\Replication Iware\Chapter 11) ;
  title "11.3.2 Example: Descriptive Estimation of Change over 2 Waves, Calibration, Table 11.3" ;
  datain cal_cal_resp_pop_sizes ;
  stratum stratum ; cluster secu ; weight kwgtr_cal ;
  mean incdiff_06_10 ;
run;

ods text="Section 11.3.2.5, Refreshment Sample Example not included as only first stage of sampling used in IVEware"

*****;
* Analysis of 3+ Waves ;

ods text="IVEware does not offer ability to produce graphics" ;
ods text="Weighted Multilevel Model in IVEware does not provide ability to use level 2 weights, not fully available in IVEware" ;
ods text="Unweighted and No Design Correction Multilevel Model is not available in IVEware REGRESS command" ;
ods text="Veiga et al. (2014) not available in IVEware" ;
ods text="Error Covariance Modeling Not Available in IVEware, see Stata example and program using
pwigls_genlin_adcv_modAV1.do for more";

****;
* Weighted GEE Analysis. ;
* "11.3.4 Example: Weighted GEE Analysis" ;
* Note: use SAS for all data management and analysis up to final model, then use IVEware with SASMOD and JRR for
weighted GEE analysis,
  this is design-based rather than model based approach ;

data hrs_2006_2012 ;
  set d.hrswide ;
  if kfinr=1 and kwgtr ne 0 ;

  * Modal imputation of missing covariate values. ;
  if selfrhealth_06 = . then selfrhealth_06 = 3 ;
  if marcat_06=. then marcat_06 = 2 ;
  if diabetes_06=. then diabetes_06 = 0 ;
  if arthritis_06=. then arthritis_06 = 1 ;
  if racecat = . then racecat=2 ;
  if edcat = . then edcat=2 ;

  * prepare ln income ;
  ln_inc06 = log(H8ITOT + 1);
  ln_inc08 = log(H9ITOT + 1);
  ln_inc10 = log(H10ITOT + 1);
  ln_inc12 = log(H11ITOT + 1);

  * Compute response indicator for 2008.;
  if ln_inc08 ne . then resp08 = 1 ; else resp08 = 0 ;
  * Compute response indicator for 2010.;
  if ln_inc10 ne . then resp10=1 ; else resp10=0 ;
  * Compute response indicator for 2012.;
  if ln_inc12 ne . then resp12=1 ; else resp12=0 ;
run ;

```

```

* "11.3.4 Weighted GEE: Check Response in 2008, 2010, 2012" ;
proc freq ;
  tables resp08 resp10 resp12 ;
run ;

title "Response propensity model (2008)." ;
proc surveylogistic data=hrs_2006_2012 ;
  strata stratum ; cluster secu ; weight kwgtr ;
  class selfrhealth_06 (ref=first) marcat_06 (ref=first) racecat (ref=first) edcat (ref=first)/ param = ref ;
  model resp08 (event='1') = ln_inc06 selfrhealth_06 age_06 marcat_06 diabetes_06 arthritis_06 racecat edcat ;
  output out=p1 p=phat08 ;
run ;
proc means n nmiss mean stderr clm ;
  var phat08 ;
run ;

title " Response propensity model (2010), respondents in 2008." ;
proc surveylogistic data=hrs_2006_2012 ;
  strata stratum ; cluster secu ; weight kwgtr ;
  domain resp08 ;
  class selfrhealth_06 (ref=first) marcat_06 (ref=first) racecat (ref=first) edcat (ref=first)/ param = ref ;
  model resp10 (event='1') = ln_inc06 selfrhealth_06 age_06 marcat_06 diabetes_06 arthritis_06 racecat edcat ;
  output out=p2 (where=(domain='resp08=1') keep=hhid pn phat10_11 domain ) p=phat10_11 ;
run ;
proc means n nmiss mean stderr clm ;
  var phat10_11 ;
run ;

title " Response propensity model (2010), non respondents in 2008." ;
proc surveylogistic data=hrs_2006_2012 ;
  strata stratum ; cluster secu ; weight kwgtr ;
  domain resp08 ;
  class selfrhealth_06 (ref=first) marcat_06 (ref=first) racecat (ref=first) edcat (ref=first)/ param = ref ;
  model resp10 (event='1') = ln_inc06 selfrhealth_06 age_06 marcat_06 diabetes_06 arthritis_06 racecat edcat ;
  output out=p3 (where=(domain='resp08=0') keep=hhid pn phat10_10 domain ) p=phat10_10 ;
run ;

proc means data=p3 n nmiss mean stderr clm ;
  var phat10_10 ;
run ;

* Response propensity model (2012), 111 pattern.;
title " Response propensity model (2012), 111 Pattern (06,08,10) " ;
proc surveylogistic data=hrs_2006_2012 ;
  strata stratum ; cluster secu ; weight kwgtr ;
  domain resp08*resp10 ;
  class selfrhealth_06 (ref=first) marcat_06 (ref=first) racecat (ref=first) edcat (ref=first)/ param = ref ;
  model resp12 (event='1') = ln_inc06 selfrhealth_06 age_06 marcat_06 diabetes_06 arthritis_06 racecat edcat ;
  output out=p4 (where=(domain='resp08=1 resp10=1') keep=hhid pn phat12_111 domain) p=phat12_111 ;
run ;

proc means n nmiss mean stderr clm ;
  var phat12_111 ;
run ;

* Response propensity model (2012), 110 pattern.;
title " Response propensity model (2012), 110 Pattern (06,08,no 10) " ;
proc surveylogistic data=hrs_2006_2012 ;
  strata stratum ; cluster secu ; weight kwgtr ;
  domain resp08*resp10 ;
  class selfrhealth_06 (ref=first) marcat_06 (ref=first) racecat (ref=first) edcat (ref=first)/ param = ref ;
  model resp12 (event='1') = ln_inc06 selfrhealth_06 age_06 marcat_06 diabetes_06 arthritis_06 racecat edcat ;
  output out=p5 (where=(domain='resp08=1 resp10=0') keep=hhid pn phat12_110 domain) p=phat12_110 ;
run ;

```

```

proc means n nmiss mean ;
  var phat12_110 ;
run ;

* Response propensity model (2012), 101 pattern.;
title " Response propensity model (2012), 101 Pattern (06,no 08,10) " ;
proc surveylogistic data=hrs_2006_2012 ;
  strata stratum ; cluster secu ; weight kwgtr ;
  domain resp08*resp10 ;
  class selfrhealth_06 (ref=first) marcat_06 (ref=first) racecat (ref=first) edcat (ref=first)/ param = ref ;
  model resp12 (event='1') = ln_inc06 selfrhealth_06 age_06 marcat_06 diabetes_06 arthritis_06 racecat edcat ;
  output out=p6 (where=(domain='resp08=0 resp10=1') keep=hhid pn phat12_101 domain) p=phat12_101 ;
run ;

proc means n nmiss mean stderr ;
  var phat12_101 ;
run ;

* Response propensity model (2012), 100 pattern.;
title " Response propensity model (2012), 100 Pattern (06,no 08,no 10) " ;
proc surveylogistic data=hrs_2006_2012 ;
  strata stratum ; cluster secu ; weight kwgtr ;
  domain resp08*resp10 ;
  class selfrhealth_06 (ref=first) marcat_06 (ref=first) racecat (ref=first) edcat (ref=first)/ param = ref ;
  model resp12 (event='1') = ln_inc06 selfrhealth_06 age_06 marcat_06 diabetes_06 arthritis_06 racecat edcat ;
  output out=p7 (where=(domain='resp08=0 resp10=0') keep=hhid pn phat12_100 domain) p=phat12_100 ;
run ;
proc means n nmiss mean stderr clm ;
  var phat12_100 ;
run ;

*merge all data sets together using hhid and pn ;
data all_cumprobs ;
  merge p1 p2 p3 p4 p5 p6 p7 ;
  by hhid pn ;
  drop domain ;

* develop cumulative probabilities ;
cumprob1=1 ;
  if resp08=1 & resp10=1 & resp12=1 then cumprob4 = phat08 * phat10_11 * phat12_111 ;
  if resp08=1 & resp10=1 & resp12=0 then cumprob4 = phat08 * phat10_11 * (1-phat12_111) ;

  if resp08=1 & resp10=0 & resp12=1 then cumprob4 = phat08 *(1-phat10_11) * phat12_110 ;
  if resp08=1 & resp10=0 & resp12=0 then cumprob4 = phat08 *(1-phat10_11)*(1-phat12_110) ;

  if resp08= 0 & resp10=1 & resp12=1 then cumprob4 =(1-phat08)*phat10_10 * phat12_101 ;
  if resp08= 0 & resp10=1 & resp12=0 then cumprob4 =(1-phat08)*phat10_10* (1-phat12_101) ;

  if resp08= 0 & resp10=0 & resp12=1 then cumprob4 =(1-phat08)*(1-phat10_10)* phat12_100 ;
  if resp08= 0 & resp10=0 & resp12=0 then cumprob4= (1-phat08)*(1-phat10_10)*(1-phat12_100) ;
cumprob_case= cumprob4 ;

  ln_inc1=log(h8itot + 1) ;
  ln_inc2=log(h9itot + 1) ;
  ln_inc3=log(h10itot + 1) ;
  ln_inc4=log(h11itot + 1) ;

run ;

* note: small differences between SAS and Stata, likely due to Stata dropping strata without observations in
subpopulation whereas SAS does not drop strata ;
title "Mean for CUMCPROB_CASE (Cumulative Probability Weight) " ;
proc means n nmiss mean std min max data=all_cumprobs ;

```

```

var cumprob_case ;
run ;

* reshape from wide to long data set ;
data hrs_long ;
set all_cumprobs ;
array inc [*] ln_inc1-ln_inc4 ;
do i=1 to 4 ;
    ln_inc = inc[i] ;
    year=i ;
    basewgt=kwgtr ;
output ;
end ;
keep hhid pn gender marcat_06 diabetes_06 arthritis_06 racecat edcat secu stratum cumprob_case ln_inc basewgt year ;
run ;

* prepare long data set for GEE weighted model ;
data hrs_long_1 ;
set hrs_long ;
casewt = basewgt * (1 / cumprob_case) ;
* Compute measure of years since 2006, and squared version. ;
if year=1 then yrssince06 = 0 ;
if year=2 then yrssince06 = 2 ;
if year=3 then yrssince06 = 4 ;
if year=4 then yrssince06 = 6 ;
yrs06sq = yrssince06*yrssince06 ;
newid=trim(hhid)||trim(pn) ;
newid_num=newid * 1 ;

run ;

proc sort data=hrs_long_1 ;
by newid_num ;
run ;

* use of IVEware %SASMOD with PROC GENMOD for a JRR approach to variance estimation in IVEware ;
title ;
%sasmod (setup=new, name="Example 11.3.4", dir=P:\ASDA3\Replication Iveware\Chapter 11) ;
title Example 11.3.4 Weighted GEE Analysis with JRR Approach;
datain hrs_long_1 ;
stratum stratum ; cluster secu ; weight casewt ;
* begin SAS code for JRR process ;

* note, since we are using STRATUM/SECU for JRR method for variance estimation we remove STRATUM predictor from model ;
proc genmod ;
class gender (ref=first) /*stratum (ref=first)*/ newid_num year ;
model ln_inc = yrssince06 gender yrs06sq yrssince06*gender yrs06sq*gender /*stratum*/ ;
repeated subject=newid_num / type=exch corrw ;
run ;

ods rtf close ;

```

Histograms of Log Income Variables not available in IVEware

IVEware Setup Checker, Sun Mar 02 08:54:10 2025

1

Setup listing:

```

title "11.3.1 Example: Descriptive Estimation at a Single Wave, CCase Analysis,
Table 11.2" ;
datain c11_hrs ;
stratum stratum ; cluster secu ; weight kwgtr ;
mean ln_inc08 ;
run;

```

IVEware Design-Based Descriptive Statistics Procedure, Sun Mar 02 08:54:11 2025 1

"11.3.1 Example: Descriptive Estimation at a Single Wave, CCase Analysis, Table 11.2

```

Stratum variable:      stratum  STRATUM ID
Cluster variable:     secu    SAMPLING ERROR COMPUTATION UNIT
Weight variable:      kwgtr   2006 WEIGHT: RESPONDENT LEVEL

```

Analysis description:

```

      4  Variables
     56  Strata
    112  Secus

Strata Model
     56  Multiple PSU
      0  Paired Selection
      0  Successive Differences

11789  Cases Read

```

IVEware Design-Based Descriptive Statistics Procedure, Sun Mar 02 08:54:11 2025

2

"11.3.1 Example: Descriptive Estimation at a Single Wave, CCase Analysis, Table 11.2"

Problem 1

Degrees of freedom

56

```

Factor   Covariance of denominator
None     0.01984

```

Mean	Number of	Sum of	Weighted	Standard
ln_inc08	Cases	Weights	Mean	Error
	10574	4.761357e+07	10.44068	0.02629565

Lower	Upper	T Test	Prob > T
Bound	Bound		
10.388	10.49336	397.04983	0.00000

Unweighted	Bias	Design
Mean		Effect
10.32688	-1.09002	3.46008

mean=34223.916791 lcl=32467.666624 ucl=36075.166535

The SURVEYLOGISTIC Procedure

Model Information		
Data Set	WORK.C11_HRS_WGT_ADJ	
Response Variable	resp08	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	52555987
Sum of Weights Used	52555987

Response Profile			
Ordered Value	resp08	Total Frequency	Total Weight
1	0	1215	4942420
2	1	10574	47613567

Probability modeled is resp08=1.

Class Level Information						
Class	Value	Design Variables				
selfrhealth_06	1	0	0	0	0	0
	2	1	0	0	0	0
	3	0	1	0	0	0
	4	0	0	1	0	0
	5	0	0	0	0	1
marcat_06	1	0	0			
	2	1	0			
	3	0	1			
racecat	1	0	0	0		
	2	1	0	0		
	3	0	1	0		
	4	0	0	1		
edcat	1	0	0	0		
	2	1	0	0		
	3	0	1	0		
	4	0	0	1		

Model Convergence Status	
Convergence criterion (GCONV=1E-8) satisfied.	

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	32772754	30734556
SC	32772770	30734825
-2 Log L	32772752	30734522

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	29.10	11.6596	652.94	<.0001
Score	19.99	16	41	<.0001
Wald	22.66	16	41	<.0001
NOTE: Second-order Rao-Scott design correction 0.3723 applied to the Likelihood Ratio test.				

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.04	1	56	0.8405
selfrhealth_06	43.04	4	53	<.0001
age_06	102.51	1	56	<.0001
marcat_06	2.81	2	55	0.0691
diabetes_06	7.90	1	56	0.0068
arthritis_06	28.03	1	56	<.0001
racecat	2.17	3	54	0.1025
edcat	0.44	3	54	0.7245

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	5.6307	0.5440	10.35	<.0001
In_inc06	0.00727	0.0359	0.20	0.8405
selfrhealth_06 2	-0.1526	0.1534	-0.99	0.3242
selfrhealth_06 3	-0.3367	0.1865	-1.81	0.0764
selfrhealth_06 4	-0.7260	0.1681	-4.32	<.0001
selfrhealth_06 5	-1.4960	0.1871	-8.00	<.0001
age_06	-0.0439	0.00434	-10.12	<.0001
marcat_06 2	0.00848	0.0892	0.10	0.9246
marcat_06 3	-0.4002	0.1774	-2.26	0.0280
diabetes_06	-0.2035	0.0724	-2.81	0.0068
arthritis_06	0.3311	0.0625	5.29	<.0001
racecat 2	0.0251	0.1419	0.18	0.8601
racecat 3	-0.1931	0.1709	-1.13	0.2634
racecat 4	-0.4276	0.2735	-1.56	0.1236
edcat 2	-0.0468	0.1016	-0.46	0.6471
edcat 3	-0.1353	0.1206	-1.12	0.2667
edcat 4	-0.0177	0.1139	-0.16	0.8773

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
NOTE: The degrees of freedom for the t tests is 56.				

Odds Ratio Estimates			
Effect	Point Estimate	95% Confidence Limits	
In_inc06	1.007	0.937	1.082
selfrhealth_06 2 vs 1	0.858	0.631	1.167
selfrhealth_06 3 vs 1	0.714	0.492	1.038
selfrhealth_06 4 vs 1	0.484	0.346	0.678
selfrhealth_06 5 vs 1	0.224	0.154	0.326
age_06	0.957	0.949	0.965
marcat_06 2 vs 1	1.009	0.844	1.206
marcat_06 3 vs 1	0.670	0.470	0.956
diabetes_06	0.816	0.706	0.943
arthritis_06	1.393	1.229	1.578
racecat 2 vs 1	1.025	0.772	1.362
racecat 3 vs 1	0.824	0.585	1.161
racecat 4 vs 1	0.652	0.377	1.128
edcat 2 vs 1	0.954	0.779	1.170
edcat 3 vs 1	0.873	0.686	1.112
edcat 4 vs 1	0.982	0.782	1.234
NOTE: The degrees of freedom in computing the confidence limits is 56.			

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	67.9	Somers' D	0.366
Percent Discordant	31.2	Gamma	0.370
Percent Tied	0.9	Tau-a	0.068
Pairs	12847410	c	0.683

The MEANS Procedure

Analysis Variable : mean_phat			
Rank for Variable phat	N Obs	N	Mean
0	1178	1178	0.7373740
1	1179	1179	0.8331323
2	1179	1179	0.8682070
3	1179	1179	0.8903160
4	1179	1179	0.9068177
5	1179	1179	0.9202366
6	1179	1179	0.9308581
7	1179	1179	0.9405440
8	1179	1179	0.9502527
9	1179	1179	0.9623867

Setup listing:

```

title 11.3.1 Example: Descriptive Estimation at a Single Wave, Wgt Adjustment,
Table 11.2 ;
datain outp_deciles_2 ;
stratum stratum ; cluster secu ; weight adj_kwgtr ;
mean ln_inc08 ;
run;
    
```

11.3.1 Example: Descriptive Estimation at a Single Wave, Wgt Adjustment, Table 11.2

Stratum variable: stratum STRATUM ID
 Cluster variable: secu SAMPLING ERROR COMPUTATION UNIT
 Weight variable: adj_kwgtr

Analysis description:

```

      4 Variables
     56 Strata
    112 Secus

Strata Model
     56 Multiple PSU
      0 Paired Selection
      0 Successive Differences

11789 Cases Read
    
```

11.3.1 Example: Descriptive Estimation at a Single Wave, Wgt Adjustment, Table 11.2

Problem 1

Degrees of freedom

56

Factor	Covariance of denominator			
None	0.02037			
Mean	Number of	Sum of	Weighted	Standard
ln_inc08	Cases	Weights	Mean	Error
	10574	5.256145e+07	10.41358	0.02661132
	Lower	Upper	T Test	Prob > T
	Bound	Bound		
	10.36027	10.46689	391.32158	0.00000
	Unweighted	Bias	Design	
	Mean		Effect	
	10.32688	-0.83263	3.52387	

mean=33308.90308 lcl=31579.706692 ucl=35132.784329

The MEANS Procedure

Variable	Label	N	N Miss	Mean	Minimum	Maximum
In_inc08		10574	1215	10.3268766	0	17.9100947
In_inc06		11789	0	10.2909710	0	17.0486936
selfrhealth_06	1=Excellent 2=Very Good 3=Good 4=Fair 5=Poor	11789	0	2.9179744	1.0000000	5.0000000
age_06	Age in 2006	11789	0	69.5194673	52.0000000	104.0000000
marcat_06	Marital Status 1=Married 2=Previously Married 3=Never Married	11789	0	1.5744338	1.0000000	3.0000000
diabetes_06	1=Yes Diabetes 0=No Diabetes	11789	0	0.2129103	0	1.0000000
arthritis_06	Arthritis 1=Yes 0=No	11789	0	0.6252439	0	1.0000000
racecat	Race 1=Hispanic 2=NH White 3=NH Black 4=NH Other	11789	0	2.1140046	1.0000000	4.0000000
edcat	Education 1=0-11 Yrs 2=12 Yrs 3=13-15 Yrs 4=16+ Yrs	11789	0	2.3958775	1.0000000	4.0000000
stratum	STRATUM ID	11789	0	30.6344898	1.0000000	56.0000000
kwgtr_dec	Rank for Variable kwgtr	11789	0	4.4854525	0	9.0000000

Setup listing:

```

title 11.3.1 Example: Descriptive Estimation at a Single Wave, MI, Table 11.2 ;
datain wt_deciles_1 ;
dataout outimpl all ;
default continuous ;
transfer hhid pn secu kwgtr ;
categorical selfrhealth_06 marcat_06 racecat edcat stratum kwgtr_dec ;
multiples 5 ;
seed 41279 ;
iterations 5 ;
run;

```

11.3.1 Example: Descriptive Estimation at a Single Wave, MI, Table 11.2

Imputation 1

Variable	Observed	Imputed	Double counted
stratum	11789	0	0
marcat_06	11789	0	0
diabetes_06	11789	0	0
arthritis_06	11789	0	0
selfrhealth_06	11789	0	0
age_06	11789	0	0
edcat	11789	0	0
racecat	11789	0	0
ln_inc06	11789	0	0
ln_inc08	10574	1215	0
kwgtr_dec	11789	0	0

Variable ln_inc08

	Observed	Imputed	Combined
Number	10574	1215	11789
Minimum	0	3.64758	0
Maximum	17.9101	14.2977	17.9101
Mean	10.3269	10.0392	10.2972
Std Dev	1.36207	1.40422	1.36921

11.3.1 Example: Descriptive Estimation at a Single Wave, MI, Table 11.2

Imputation 2

Variable	Observed	Imputed	Double counted
stratum	11789	0	0
marcat_06	11789	0	0
diabetes_06	11789	0	0
arthritis_06	11789	0	0
selfrhealth_06	11789	0	0
age_06	11789	0	0
edcat	11789	0	0
racecat	11789	0	0
ln_inc06	11789	0	0
ln_inc08	10574	1215	0
kwgtr_dec	11789	0	0

Variable ln_inc08

	Observed	Imputed	Combined
Number	10574	1215	11789
Minimum	0	3.16741	0
Maximum	17.9101	14.3312	17.9101
Mean	10.3269	10.0925	10.3027
Std Dev	1.36207	1.35868	1.36352

11.3.1 Example: Descriptive Estimation at a Single Wave, MI, Table 11.2

Imputation 3

Variable	Observed	Imputed	Double counted
stratum	11789	0	0
marcat_06	11789	0	0
diabetes_06	11789	0	0
arthritis_06	11789	0	0
selfrhealth_06	11789	0	0
age_06	11789	0	0
edcat	11789	0	0
racecat	11789	0	0
ln_inc06	11789	0	0
ln_inc08	10574	1215	0
kwgtr_dec	11789	0	0

Variable ln_inc08

	Observed	Imputed	Combined
Number	10574	1215	11789
Minimum	0	3.01754	0
Maximum	17.9101	13.8891	17.9101
Mean	10.3269	10.0195	10.2952
Std Dev	1.36207	1.34716	1.36369

11.3.1 Example: Descriptive Estimation at a Single Wave, MI, Table 11.2

Imputation 4

Variable	Observed	Imputed	Double counted
stratum	11789	0	0
marcat_06	11789	0	0
diabetes_06	11789	0	0
arthritis_06	11789	0	0
selfrhealth_06	11789	0	0
age_06	11789	0	0
edcat	11789	0	0
racecat	11789	0	0
ln_inc06	11789	0	0
ln_inc08	10574	1215	0
kwgtr_dec	11789	0	0

Variable ln_inc08

	Observed	Imputed	Combined
Number	10574	1215	11789
Minimum	0	2.72432	0
Maximum	17.9101	13.8565	17.9101
Mean	10.3269	10.0728	10.3007
Std Dev	1.36207	1.37097	1.36512

11.3.1 Example: Descriptive Estimation at a Single Wave, MI, Table 11.2

Imputation 5

Variable	Observed	Imputed	Double counted
stratum	11789	0	0
marcat_06	11789	0	0
diabetes_06	11789	0	0
arthritis_06	11789	0	0
selfrhealth_06	11789	0	0
age_06	11789	0	0
edcat	11789	0	0
racecat	11789	0	0
ln_inc06	11789	0	0
ln_inc08	10574	1215	0
kwgtr_dec	11789	0	0

Variable ln_inc08

	Observed	Imputed	Combined
Number	10574	1215	11789
Minimum	0	2.66398	0
Maximum	17.9101	13.6488	17.9101
Mean	10.3269	10.0712	10.3005
Std Dev	1.36207	1.35162	1.36315

Setup listing:

```

title 11.3.1 Example: Descriptive Estimation at a Single Wave, MI, Table 11.2 ;
datain outimpl ;
stratum stratum ; cluster secu ; weight kwgtr ;
mean ln_inc08 ;
run;
    
```

11.3.1 Example: Descriptive Estimation at a Single Wave, MI, Table 11.2

```

Stratum variable:      stratum  STRATUM ID
Cluster variable:     secu    SAMPLING ERROR COMPUTATION UNIT
Weight variable:      kwgtr   2006 WEIGHT: RESPONDENT LEVEL
    
```

Analysis description:

```

      4 Variables
     56 Strata
    112 Secus

Strata Model
     56 Multiple PSU
      0 Paired Selection
      0 Successive Differences

58945 Cases Read
    
```

11.3.1 Example: Descriptive Estimation at a Single Wave, MI, Table 11.2

Problem 1

Degrees of freedom

56

Factor Covariance of denominator
None 0.01899

Mean	Number of	Sum of	Weighted	Standard
ln_inc08	Cases	Weights	Mean	Error
	58945	2.627799e+08	10.4158	0.02540253
	Lower Bound	Upper Bound	T Test	Prob > T
	10.36491	10.46669	410.02994	0.00000
	Unweighted Mean	Bias	Design Effect	
	10.29927	-1.11873	18.07229	

mean=33382.930986 lcl=31726.577007 ucl=35125.758475

Imputation Using a Selection Model Not Available in IVEware

Setup listing:

```

title "11.3.2 Example: Descriptive Estimation of Change over 2 Waves, CC
Analysis, Table 11.3" ;
datain c11_hrs_2waves ;
stratum stratum ; cluster secu ; weight kwgtr ;
mean incdiff_06_10 ;
run;
    
```

"11.3.2 Example: Descriptive Estimation of Change over 2 Waves, CC Analysis, Table 1

Stratum variable: stratum STRATUM ID
 Cluster variable: secu SAMPLING ERROR COMPUTATION UNIT
 Weight variable: kwgtr 2006 WEIGHT: RESPONDENT LEVEL

Analysis description:

```

      4 Variables
     56 Strata
    112 Secus

Strata Model
     56 Multiple PSU
      0 Paired Selection
      0 Successive Differences

11789 Cases Read
    
```

2

"11.3.2 Example: Descriptive Estimation of Change over 2 Waves, CC Analysis, Table 11.3"

Problem 1

Degrees of freedom

56

Factor Covariance of denominator
 None 0.01956

Mean	Number of Cases	Sum of Weights	Weighted Mean	Standard Error
incdiff_06_10	9402	4.323241e+07	-6551.402	1866.135

Lower Bound	Upper Bound	T Test	Prob > T
-10289.73	-2813.074	-3.51068	0.00089

Unweighted Mean	Bias	Design Effect
-6124.494	-6.51628	1.08079

The FREQ Procedure

resp10	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2387	20.25	2387	20.25
1	9402	79.75	11789	100.00

The SURVEYLOGISTIC Procedure

Model Information		
Data Set	WORK.C11_HRS_2WAVES	
Response Variable	resp10	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	52555987
Sum of Weights Used	52555987

Response Profile			
Ordered Value	resp10	Total Frequency	Total Weight
1	0	2387	9323578
2	1	9402	43232409

Probability modeled is resp10=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		
	3	0	1		
racecat	1	0	0	0	

Class Level Information					
Class	Value	Design Variables			
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	49132729	43706079
SC	49132745	43706347
-2 Log L	49132727	43706045

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	80.14	11.3432	635.22	<.0001
Score	36.70	16	41	<.0001
Wald	31.73	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.4105 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.45	1	56	0.2339
selfrhealth_06	66.01	4	53	<.0001
age_06	297.29	1	56	<.0001
marcat_06	3.52	2	55	0.0364
diabetes_06	5.10	1	56	0.0278
arthritis_06	39.11	1	56	<.0001
racecat	0.19	3	54	0.9018
edcat	0.62	3	54	0.6046

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.0712	0.4177	14.53	<.0001
In_inc06	0.0291	0.0241	1.20	0.2339
selfrhealth_06 2	-0.1754	0.1280	-1.37	0.1762
selfrhealth_06 3	-0.4479	0.1394	-3.21	0.0022
selfrhealth_06 4	-0.8735	0.1234	-7.08	<.0001
selfrhealth_06 5	-1.6189	0.1466	-11.04	<.0001
age_06	-0.0641	0.00372	-17.24	<.0001
marcat_06 2	-0.00117	0.0628	-0.02	0.9851

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
marcat_06	3	-0.2803	0.1134	-2.47	0.0165
diabetes_06		-0.1475	0.0653	-2.26	0.0278
arthritis_06		0.3111	0.0497	6.25	<.0001
racecat	2	-0.0506	0.1218	-0.42	0.6795
racecat	3	0.0227	0.1298	0.18	0.8615
racecat	4	-0.0452	0.2847	-0.16	0.8745
edcat	2	0.0490	0.0729	0.67	0.5047
edcat	3	0.0786	0.0752	1.05	0.3003
edcat	4	0.0675	0.0813	0.83	0.4103

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.029	0.981 1.080
selfrhealth_06	2 vs 1	0.839	0.649 1.084
selfrhealth_06	3 vs 1	0.639	0.483 0.845
selfrhealth_06	4 vs 1	0.418	0.326 0.535
selfrhealth_06	5 vs 1	0.198	0.148 0.266
age_06		0.938	0.931 0.945
marcat_06	2 vs 1	0.999	0.881 1.133
marcat_06	3 vs 1	0.756	0.602 0.948
diabetes_06		0.863	0.757 0.983
arthritis_06		1.365	1.235 1.508
racecat	2 vs 1	0.951	0.745 1.213
racecat	3 vs 1	1.023	0.789 1.327
racecat	4 vs 1	0.956	0.540 1.691
edcat	2 vs 1	1.050	0.907 1.215
edcat	3 vs 1	1.082	0.931 1.258
edcat	4 vs 1	1.070	0.909 1.259

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	72.7	Somers' D	0.457
Percent Discordant	26.9	Gamma	0.459
Percent Tied	0.4	Tau-a	0.148
Pairs	22442574	c	0.729

Setup listing:

```

title "11.3.2 Example: Descriptive Estimation of Change over 2 Waves, Adj. Wgt,
Table 11.3" ;
datain outp_deciles_2 ;
stratum stratum ; cluster secu ; weight adj_kwgtr ;
mean incdiff_06_10 ;
run;
    
```

"11.3.2 Example: Descriptive Estimation of Change over 2 Waves, Adj. Wgt, Table 11.3

Stratum variable: stratum STRATUM ID
 Cluster variable: secu SAMPLING ERROR COMPUTATION UNIT
 Weight variable: adj_kwgtr

Analysis description:

```

      4 Variables
     56 Strata
    112 Secus

Strata Model
     56 Multiple PSU
      0 Paired Selection
      0 Successive Differences

11789 Cases Read
    
```

"11.3.2 Example: Descriptive Estimation of Change over 2 Waves, Adj. Wgt, Table 11.3"

Problem 1

Degrees of freedom

56

Factor Covariance of denominator
 None 0.02091

Mean	Number of	Sum of	Weighted	Standard
incdiff_06_10	Cases	Weights	Mean	Error
	9402	5.246967e+07	-6119.97	1702.965

Lower	Upper	T Test	Prob > T
Bound	Bound		
-9531.428	-2708.511	-3.59371	0.00069

Unweighted	Bias	Design
Mean		Effect
-6124.494	0.07393	0.98361

The MEANS Procedure

Variable	Label	N	N Miss	Mean	Minimum	Maximum
secu	SAMPLING ERROR COMPUTATION UNIT	11789	0	1.5029265	1.0000000	2.0000000
stratum	STRATUM ID	11789	0	30.6344898	1.0000000	56.0000000
kwgtr	2006 WEIGHT: RESPONDENT LEVEL	11789	0	4458.05	924.0000000	17035.00
marcat_06	Marital Status 1=Married 2=Previously Married 3=Never Married	11789	0	1.5744338	1.0000000	3.0000000
diabetes_06	1=Yes Diabetes 0=No Diabetes	11789	0	0.2129103	0	1.0000000
arthritis_06	Arthritis 1=Yes 0=No	11789	0	0.6252439	0	1.0000000
selfrhealth_06	1=Excellent 2=Very Good 3=Good 4=Fair 5=Poor	11789	0	2.9179744	1.0000000	5.0000000
age_06	Age in 2006	11789	0	69.5194673	52.0000000	104.0000000
edcat	Education 1=0-11 Yrs 2=12 Yrs 3=13-15 Yrs 4=16+ Yrs	11789	0	2.3958775	1.0000000	4.0000000
racecat	Race 1=Hispanic 2=NH White 3=NH Black 4=NH Other	11789	0	2.1140046	1.0000000	4.0000000
ln_inc06		11789	0	10.2909710	0	17.0486936
ln_inc10		9402	2387	10.2634346	0	14.9225145
kwgtr_dec	Rank for Variable kwgtr	11789	0	4.4854525	0	9.0000000

IVEware Setup Checker, Sun Mar 02 08:54:34 2025

1

Setup listing:

```

title 11.3.2 Example: Descriptive Estimation at 2 Waves, MI, Table 11.3 ;
datain wt_deciles_1 ;
dataout outimpla all ;
default continuous ;
transfer hhid pn secu kwgtr ;
categorical selfrhealth_06 marcat_06 racecat edcat stratum kwgtr_dec ;
multiples 5 ;
seed 41279 ;
iterations 5 ;
run;

```

IVEware Iterative Imputation Procedure, Sun Mar 02 08:54:37 2025

1

11.3.2 Example: Descriptive Estimation at 2 Waves, MI, Table 11.3

Imputation 1

Variable	Observed	Imputed	Double counted
stratum	11789	0	0
marcat_06	11789	0	0
diabetes_06	11789	0	0
arthritis_06	11789	0	0
selfrhealth_06	11789	0	0
age_06	11789	0	0
edcat	11789	0	0
racecat	11789	0	0
ln_inc06	11789	0	0
ln_inc10	9402	2387	0
kwgtr_dec	11789	0	0

Variable ln_inc10

	Observed	Imputed	Combined
Number	9402	2387	11789
Minimum	0	2.22449	0
Maximum	14.9225	14.8992	14.9225
Mean	10.2634	9.92267	10.1944
Std Dev	1.49779	1.51812	1.50809

11.3.2 Example: Descriptive Estimation at 2 Waves, MI, Table 11.3

Imputation 2

Variable	Observed	Imputed	Double counted
stratum	11789	0	0
marcat_06	11789	0	0
diabetes_06	11789	0	0
arthritis_06	11789	0	0
selfrhealth_06	11789	0	0
age_06	11789	0	0
edcat	11789	0	0
racecat	11789	0	0
ln_inc06	11789	0	0
ln_inc10	9402	2387	0
kwgtr_dec	11789	0	0

Variable ln_inc10

	Observed	Imputed	Combined
Number	9402	2387	11789
Minimum	0	5.10621	0
Maximum	14.9225	15.2371	15.2371
Mean	10.2634	9.96752	10.2035
Std Dev	1.49779	1.50099	1.50308

11.3.2 Example: Descriptive Estimation at 2 Waves, MI, Table 11.3

Imputation 3

Variable	Observed	Imputed	Double counted
stratum	11789	0	0
marcat_06	11789	0	0
diabetes_06	11789	0	0
arthritis_06	11789	0	0
selfrhealth_06	11789	0	0
age_06	11789	0	0
edcat	11789	0	0
racecat	11789	0	0
ln_inc06	11789	0	0
ln_inc10	9402	2387	0
kwgtr_dec	11789	0	0

Variable ln_inc10

	Observed	Imputed	Combined
Number	9402	2387	11789
Minimum	0	4.55337	0
Maximum	14.9225	14.6593	14.9225
Mean	10.2634	9.95562	10.2011
Std Dev	1.49779	1.46659	1.49658

11.3.2 Example: Descriptive Estimation at 2 Waves, MI, Table 11.3

Imputation 4

Variable	Observed	Imputed	Double counted
stratum	11789	0	0
marcat_06	11789	0	0
diabetes_06	11789	0	0
arthritis_06	11789	0	0
selfrhealth_06	11789	0	0
age_06	11789	0	0
edcat	11789	0	0
racecat	11789	0	0
ln_inc06	11789	0	0
ln_incl0	9402	2387	0
kwgtr_dec	11789	0	0

Variable ln_incl0

	Observed	Imputed	Combined
Number	9402	2387	11789
Minimum	0	4.34561	0
Maximum	14.9225	15.0532	15.0532
Mean	10.2634	9.94375	10.1987
Std Dev	1.49779	1.46258	1.49619

11.3.2 Example: Descriptive Estimation at 2 Waves, MI, Table 11.3

Imputation 5

Variable	Observed	Imputed	Double counted
stratum	11789	0	0
marcat_06	11789	0	0
diabetes_06	11789	0	0
arthritis_06	11789	0	0
selfrhealth_06	11789	0	0
age_06	11789	0	0
edcat	11789	0	0
racecat	11789	0	0
ln_inc06	11789	0	0
ln_incl0	9402	2387	0
kwgtr_dec	11789	0	0

Variable ln_incl0

	Observed	Imputed	Combined
Number	9402	2387	11789
Minimum	0	2.74085	0
Maximum	14.9225	14.6691	14.9225
Mean	10.2634	9.94966	10.1999
Std Dev	1.49779	1.45911	1.4953

Setup listing:

```

title "11.3.2 Example: Descriptive Estimation of Change over 2 Waves, MI Method,
Table 11.3" ;
datain outimp2 ;
stratum stratum ; cluster secu ; weight kwgtr ;
mean new_chg0610 ;
run;
    
```

"11.3.2 Example: Descriptive Estimation of Change over 2 Waves, MI Method, Table 11.

Stratum variable: stratum STRATUM ID
 Cluster variable: secu SAMPLING ERROR COMPUTATION UNIT
 Weight variable: kwgtr 2006 WEIGHT: RESPONDENT LEVEL

Analysis description:

```

      4 Variables
     56 Strata
    112 Secus

Strata Model
     56 Multiple PSU
      0 Paired Selection
      0 Successive Differences

58945 Cases Read
    
```

"11.3.2 Example: Descriptive Estimation of Change over 2 Waves, MI Method, Table 11.3"

Problem 1

Degrees of freedom

56

Factor	Covariance of denominator			
None	0.01899			
Mean	Number of	Sum of	Weighted	Standard
new_chg0610	Cases	Weights	Mean	Error
	58945	2.627799e+08	-3166.236	2868.159
	Lower	Upper	T Test	Prob > T
	Bound	Bound		
	-8911.865	2579.393	-1.10393	0.27435
	Unweighted	Bias	Design	
	Mean		Effect	
	-1313.063	-58.52922	8.19724	

The FREQ Procedure

racecat	edcat	gender	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	1	1	243	2.06	243	2.06
1	1	2	392	3.33	635	5.39
1	2	1	83	0.70	718	6.09
1	2	2	100	0.85	818	6.94
1	3	1	68	0.58	886	7.52
1	3	2	84	0.71	970	8.23
1	4	1	36	0.31	1006	8.53
1	4	2	33	0.28	1039	8.81
2	1	1	611	5.18	1650	14.00
2	1	2	866	7.35	2516	21.34
2	2	1	1152	9.77	3668	31.11
2	2	2	1967	16.69	5635	47.80
2	3	1	840	7.13	6475	54.92
2	3	2	1032	8.75	7507	63.68
2	4	1	1362	11.55	8869	75.23
2	4	2	797	6.76	9666	81.99
3	1	1	251	2.13	9917	84.12
3	1	2	469	3.98	10386	88.10
3	2	1	174	1.48	10560	89.58
3	2	2	373	3.16	10933	92.74
3	3	1	114	0.97	11047	93.71
3	3	2	238	2.02	11285	95.72
3	4	1	86	0.73	11371	96.45
3	4	2	158	1.34	11529	97.79
4	1	1	21	0.18	11550	97.97
4	1	2	36	0.31	11586	98.28
4	2	1	19	0.16	11605	98.44
4	2	2	35	0.30	11640	98.74
4	3	1	26	0.22	11666	98.96
4	3	2	36	0.31	11702	99.26
4	4	1	53	0.45	11755	99.71
4	4	2	34	0.29	11789	100.00

The MEANS Procedure

Analysis Variable : kwgtr 2006 WEIGHT: RESPONDENT LEVEL						
Race 1=Hispanic 2=NH White 3=NH Black 4=NH Other	Education 1=0-11 Yrs 2=12 Yrs 3=13- 15 Yrs 4=16+ Yrs	Gender 1=Male 2=Female	N Obs	Sum	N Miss	Mean
1	1	1	243	952539.00	0	3919.91
		2	392	1297966.00	0	3311.14
	2	1	83	339270.00	0	4087.59
		2	100	338442.00	0	3384.42
	3	1	68	306781.00	0	4511.49
		2	84	332306.00	0	3956.02
	4	1	36	197080.00	0	5474.44
		2	33	117180.00	0	3550.91
2	1	1	611	2545549.00	0	4166.20
		2	866	3402321.00	0	3928.78
	2	1	1152	5676873.00	0	4927.84
		2	1967	8598832.00	0	4371.55
	3	1	840	4655233.00	0	5541.94
		2	1032	5073592.00	0	4916.27
	4	1	1362	7663934.00	0	5626.97
		2	797	4143263.00	0	5198.57
3	1	1	251	726190.00	0	2893.19
		2	469	1163709.00	0	2481.26
	2	1	174	614359.00	0	3530.80
		2	373	1043799.00	0	2798.39
	3	1	114	452512.00	0	3969.40
		2	238	739390.00	0	3106.68
	4	1	86	349839.00	0	4067.90
		2	158	458371.00	0	2901.08
4	1	1	21	80328.00	0	3825.14
		2	36	146168.00	0	4060.22
	2	1	19	88160.00	0	4640.00
		2	35	189664.00	0	5418.97
	3	1	26	137638.00	0	5293.77
		2	36	200783.00	0	5577.31
	4	1	53	349311.00	0	6590.77
		2	34	174605.00	0	5135.44

Obs	racecat	edcat	gender	_TYPE_	_FREQ_	popsize
1	1	1	1	7	243	952539
2	1	1	2	7	392	1297966
3	1	2	1	7	83	339270
4	1	2	2	7	100	338442
5	1	3	1	7	68	306781
6	1	3	2	7	84	332306
7	1	4	1	7	36	197080
8	1	4	2	7	33	117180
9	2	1	1	7	611	2545549
10	2	1	2	7	866	3402321
11	2	2	1	7	1152	5676873
12	2	2	2	7	1967	8598832
13	2	3	1	7	840	4655233
14	2	3	2	7	1032	5073592
15	2	4	1	7	1362	7663934
16	2	4	2	7	797	4143263
17	3	1	1	7	251	726190
18	3	1	2	7	469	1163709
19	3	2	1	7	174	614359
20	3	2	2	7	373	1043799
21	3	3	1	7	114	452512
22	3	3	2	7	238	739390
23	3	4	1	7	86	349839
24	3	4	2	7	158	458371
25	4	1	1	7	21	80328
26	4	1	2	7	36	146168
27	4	2	1	7	19	88160
28	4	2	2	7	35	189664
29	4	3	1	7	26	137638
30	4	3	2	7	36	200783
31	4	4	1	7	53	349311
32	4	4	2	7	34	174605

The MEANS Procedure

Analysis Variable : kwgr 2006 WEIGHT: RESPONDENT LEVEL							
Race 1=Hispanic 2=NH White 3=NH Black 4=NH Other	Education 1=0-11 Yrs 2=12 Yrs 3=13- 15 Yrs 4=16+ Yrs	Gender 1=Male 2=Female	N Obs	Sum	N Miss	Mean	
1	1	1	183	715504.00	0	3909.86	
		2	312	1070258.00	0	3430.31	
	2	1	67	278814.00	0	4161.40	
		2	79	259196.00	0	3280.96	
	3	1	58	265283.00	0	4573.84	
		2	71	268132.00	0	3776.51	
	4	1	30	170094.00	0	5669.80	
		2	29	104168.00	0	3592.00	
	2	1	1	424	1844304.00	0	4349.77
			2	613	2433966.00	0	3970.58
2		1	904	4605583.00	0	5094.67	
		2	1561	6987371.00	0	4476.21	
3		1	693	3941101.00	0	5687.01	
		2	859	4309926.00	0	5017.38	
4		1	1147	6682990.00	0	5826.50	
		2	671	3575251.00	0	5328.24	
3		1	1	174	529836.00	0	3045.03
			2	358	916106.00	0	2558.96
	2	1	141	527373.00	0	3740.23	
		2	303	855906.00	0	2824.77	
	3	1	97	406108.00	0	4186.68	
		2	209	651115.00	0	3115.38	
	4	1	67	275110.00	0	4106.12	
		2	139	414571.00	0	2982.53	
	4	1	1	16	68319.00	0	4269.94
			2	29	125535.00	0	4328.79
2		1	15	59569.00	0	3971.27	
		2	33	183355.00	0	5556.21	
3		1	22	126835.00	0	5765.23	
		2	31	166551.00	0	5372.61	
4		1	40	266463.00	0	6661.58	
		2	27	147716.00	0	5470.96	

Obs	racecat	edcat	gender	_TYPE_	_FREQ_	sumrespwgt
1	1	1	1	7	183	715504
2	1	1	2	7	312	1070258
3	1	2	1	7	67	278814
4	1	2	2	7	79	259196
5	1	3	1	7	58	265283
6	1	3	2	7	71	268132
7	1	4	1	7	30	170094
8	1	4	2	7	29	104168
9	2	1	1	7	424	1844304
10	2	1	2	7	613	2433966
11	2	2	1	7	904	4605583
12	2	2	2	7	1561	6987371
13	2	3	1	7	693	3941101
14	2	3	2	7	859	4309926
15	2	4	1	7	1147	6682990
16	2	4	2	7	671	3575251
17	3	1	1	7	174	529836
18	3	1	2	7	358	916106
19	3	2	1	7	141	527373
20	3	2	2	7	303	855906
21	3	3	1	7	97	406108
22	3	3	2	7	209	651115
23	3	4	1	7	67	275110
24	3	4	2	7	139	414571
25	4	1	1	7	16	68319
26	4	1	2	7	29	125535
27	4	2	1	7	15	59569
28	4	2	2	7	33	183355
29	4	3	1	7	22	126835
30	4	3	2	7	31	166551
31	4	4	1	7	40	266463
32	4	4	2	7	27	147716

The MEANS Procedure

Analysis Variable : kwgtr 2006 WEIGHT: RESPONDENT LEVEL				
Race 1=Hispanic 2=NH White 3=NH Black 4=NH Other	Education 1=0-11 Yrs 2=12 Yrs 3=13- 15 Yrs 4=16+ Yrs	Gender 1=Male 2=Female	N Obs	Sum
1	1	1	243	952539.00
		2	392	1297966.00
	2	1	83	339270.00
		2	100	338442.00
	3	1	68	306781.00
		2	84	332306.00
	4	1	36	197080.00
		2	33	117180.00
2	1	1	611	2545549.00
		2	866	3402321.00
	2	1	1152	5676873.00
		2	1967	8598832.00
	3	1	840	4655233.00
		2	1032	5073592.00
	4	1	1362	7663934.00
		2	797	4143263.00
3	1	1	251	726190.00
		2	469	1163709.00
	2	1	174	614359.00
		2	373	1043799.00
	3	1	114	452512.00
		2	238	739390.00
	4	1	86	349839.00
		2	158	458371.00
4	1	1	21	80328.00
		2	36	146168.00
	2	1	19	88160.00
		2	35	189664.00
	3	1	26	137638.00
		2	36	200783.00
	4	1	53	349311.00
		2	34	174605.00

The MEANS Procedure

Analysis Variable : kwgtr_cal				
Race 1=Hispanic 2=NH White 3=NH Black 4=NH Other	Education 1=0-11 Yrs 2=12 Yrs 3=13- 15 Yrs 4=16+ Yrs	Gender 1=Male 2=Female	N Obs	Sum
1	1	1	183	952539.00
		2	312	1297966.00
	2	1	67	339270.00
		2	79	338442.00
	3	1	58	306781.00
		2	71	332306.00
	4	1	30	197080.00
		2	29	117180.00
2	1	1	424	2545549.00
		2	613	3402321.00
	2	1	904	5676873.00
		2	1561	8598832.00
	3	1	693	4655233.00
		2	859	5073592.00
	4	1	1147	7663934.00
		2	671	4143263.00
3	1	1	174	726190.00
		2	358	1163709.00
	2	1	141	614359.00
		2	303	1043799.00
	3	1	97	452512.00
		2	209	739390.00
	4	1	67	349839.00
		2	139	458371.00
4	1	1	16	80328.00
		2	29	146168.00
	2	1	15	88160.00
		2	33	189664.00
	3	1	22	137638.00
		2	31	200783.00
	4	1	40	349311.00
		2	27	174605.00

Setup listing:

```

title "11.3.2 Example: Descriptive Estimation of Change over 2 Waves,
Calibration, Table 11.3" ;
datain cal_cal_resp_pop_sizes ;
stratum stratum ; cluster secu ; weight kwgtr_cal ;
mean incdiff_06_10 ;
run;
    
```

"11.3.2 Example: Descriptive Estimation of Change over 2 Waves, Calibration, Table 1

Stratum variable: stratum STRATUM ID
 Cluster variable: secu SAMPLING ERROR COMPUTATION UNIT
 Weight variable: kwgtr_cal

Analysis description:

```

      4 Variables
     56 Strata
    112 Secus

Strata Model
     56 Multiple PSU
      0 Paired Selection
      0 Successive Differences

    9402 Cases Read
    
```

"11.3.2 Example: Descriptive Estimation of Change over 2 Waves, Calibration, Table 11.3"

Problem 1

Degrees of freedom

56

Factor Covariance of denominator
 None 0.01963

Mean	Number of	Sum of	Weighted	Standard
incdiff_06_10	Cases	Weights	Mean	Error
	9402	5.255599e+07	-6341.657	1780.599

Lower	Upper	T Test	Prob > T
Bound	Bound		
-9908.636	-2774.678	-3.56153	0.00076

Unweighted	Bias	Design
Mean		Effect
-6124.494	-3.42439	1.03548

Section 11.3.2.5, Refreshment Sample Example not included as only first stage of sampling used in IVEware

IVEware does not offer ability to produce graphics

Weighted Multilevel Model in IVEware does not provide ability to use level 2 weights, not fully available in IVEware

Unweighted and No Design Correction Multilevel Model is not available in IVEware REGRESS command

Veiga et al. (2014) not available in IVEware

Error Covariance Modeling Not Available in IVEware, see Stata example and program using pwigls_genlin_adcv_modAV1.do for more

The FREQ Procedure

resp08	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	1215	10.31	1215	10.31
1	10574	89.69	11789	100.00

resp10	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2387	20.25	2387	20.25
1	9402	79.75	11789	100.00

resp12	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	3229	27.39	3229	27.39
1	8560	72.61	11789	100.00

Response propensity model (2008).

The SURVEYLOGISTIC Procedure

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp08	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	52555987
Sum of Weights Used	52555987

Response Profile			
Ordered Value	resp08	Total Frequency	Total Weight
1	0	1215	4942420
2	1	10574	47613567

Probability modeled is resp08=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	

Class Level Information					
Class	Value	Design Variables			
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	32772754	30734556
SC	32772770	30734825
-2 Log L	32772752	30734522

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	29.10	11.6596	652.94	<.0001
Score	19.99	16	41	<.0001
Wald	22.66	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.3723 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.04	1	56	0.8405
selfrhealth_06	43.04	4	53	<.0001
age_06	102.51	1	56	<.0001
marcat_06	2.81	2	55	0.0691
diabetes_06	7.90	1	56	0.0068
arthritis_06	28.03	1	56	<.0001
racecat	2.17	3	54	0.1025
edcat	0.44	3	54	0.7245

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	5.6307	0.5440	10.35	<.0001
In_inc06	0.00727	0.0359	0.20	0.8405
selfrhealth_06 2	-0.1526	0.1534	-0.99	0.3242
selfrhealth_06 3	-0.3367	0.1865	-1.81	0.0764
selfrhealth_06 4	-0.7260	0.1681	-4.32	<.0001
selfrhealth_06 5	-1.4960	0.1871	-8.00	<.0001
age_06	-0.0439	0.00434	-10.12	<.0001
marcat_06 2	0.00848	0.0892	0.10	0.9246
marcat_06 3	-0.4002	0.1774	-2.26	0.0280
diabetes_06	-0.2035	0.0724	-2.81	0.0068
arthritis_06	0.3311	0.0625	5.29	<.0001
racecat 2	0.0251	0.1419	0.18	0.8601
racecat 3	-0.1931	0.1709	-1.13	0.2634

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
racecat	4	-0.4276	0.2735	-1.56	0.1236
edcat	2	-0.0468	0.1016	-0.46	0.6471
edcat	3	-0.1353	0.1206	-1.12	0.2667
edcat	4	-0.0177	0.1139	-0.16	0.8773

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.007	0.937 1.082
selfrhealth_06	2 vs 1	0.858	0.631 1.167
selfrhealth_06	3 vs 1	0.714	0.492 1.038
selfrhealth_06	4 vs 1	0.484	0.346 0.678
selfrhealth_06	5 vs 1	0.224	0.154 0.326
age_06		0.957	0.949 0.965
marcat_06	2 vs 1	1.009	0.844 1.206
marcat_06	3 vs 1	0.670	0.470 0.956
diabetes_06		0.816	0.706 0.943
arthritis_06		1.393	1.229 1.578
racecat	2 vs 1	1.025	0.772 1.362
racecat	3 vs 1	0.824	0.585 1.161
racecat	4 vs 1	0.652	0.377 1.128
edcat	2 vs 1	0.954	0.779 1.170
edcat	3 vs 1	0.873	0.686 1.112
edcat	4 vs 1	0.982	0.782 1.234

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	67.9	Somers' D	0.366
Percent Discordant	31.2	Gamma	0.370
Percent Tied	0.9	Tau-a	0.068
Pairs	12847410	c	0.683

Response propensity model (2008).

The MEANS Procedure

Analysis Variable : phat08 Estimated Probability					
N	N Miss	Mean	Std Error	Lower 95% CL for Mean	Upper 95% CL for Mean
11789	0	0.8940258	0.000622060	0.8928065	0.8952451

Response propensity model (2010), respondents in 2008.

The SURVEYLOGISTIC Procedure

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp10	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	52555987
Sum of Weights Used	52555987

Response Profile			
Ordered Value	resp10	Total Frequency	Total Weight
1	0	2387	9323578
2	1	9402	43232409

Probability modeled is resp10=1.

Class Level Information						
Class	Value	Design Variables				
selfrhealth_06	1	0	0	0	0	0
	2	1	0	0	0	0
	3	0	1	0	0	0
	4	0	0	1	0	0
	5	0	0	0	0	1
marcat_06	1	0	0			
	2	1	0			
	3	0	1			
racecat	1	0	0	0		
	2	1	0	0		
	3	0	1	0		
	4	0	0	1		
edcat	1	0	0	0		
	2	1	0	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	49132729	43706079
SC	49132745	43706347
-2 Log L	49132727	43706045

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	80.14	11.3432	635.22	<.0001
Score	36.70	16	41	<.0001
Wald	31.73	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.4105 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.45	1	56	0.2339
selfrhealth_06	66.01	4	53	<.0001
age_06	297.29	1	56	<.0001
marcat_06	3.52	2	55	0.0364
diabetes_06	5.10	1	56	0.0278
arthritis_06	39.11	1	56	<.0001
racecat	0.19	3	54	0.9018
edcat	0.62	3	54	0.6046

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.0712	0.4177	14.53	<.0001
In_inc06	0.0291	0.0241	1.20	0.2339
selfrhealth_06 2	-0.1754	0.1280	-1.37	0.1762
selfrhealth_06 3	-0.4479	0.1394	-3.21	0.0022
selfrhealth_06 4	-0.8735	0.1234	-7.08	<.0001
selfrhealth_06 5	-1.6189	0.1466	-11.04	<.0001
age_06	-0.0641	0.00372	-17.24	<.0001
marcat_06 2	-0.00117	0.0628	-0.02	0.9851
marcat_06 3	-0.2803	0.1134	-2.47	0.0165
diabetes_06	-0.1475	0.0653	-2.26	0.0278
arthritis_06	0.3111	0.0497	6.25	<.0001
racecat 2	-0.0506	0.1218	-0.42	0.6795
racecat 3	0.0227	0.1298	0.18	0.8615

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
racecat	4	-0.0452	0.2847	-0.16	0.8745
edcat	2	0.0490	0.0729	0.67	0.5047
edcat	3	0.0786	0.0752	1.05	0.3003
edcat	4	0.0675	0.0813	0.83	0.4103

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates				
Effect		Point Estimate	95% Confidence Limits	
In_inc06		1.029	0.981	1.080
selfrhealth_06	2 vs 1	0.839	0.649	1.084
selfrhealth_06	3 vs 1	0.639	0.483	0.845
selfrhealth_06	4 vs 1	0.418	0.326	0.535
selfrhealth_06	5 vs 1	0.198	0.148	0.266
age_06		0.938	0.931	0.945
marcat_06	2 vs 1	0.999	0.881	1.133
marcat_06	3 vs 1	0.756	0.602	0.948
diabetes_06		0.863	0.757	0.983
arthritis_06		1.365	1.235	1.508
racecat	2 vs 1	0.951	0.745	1.213
racecat	3 vs 1	1.023	0.789	1.327
racecat	4 vs 1	0.956	0.540	1.691
edcat	2 vs 1	1.050	0.907	1.215
edcat	3 vs 1	1.082	0.931	1.258
edcat	4 vs 1	1.070	0.909	1.259

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	72.7	Somers' D	0.457
Percent Discordant	26.9	Gamma	0.459
Percent Tied	0.4	Tau-a	0.148
Pairs	22442574	c	0.729

Response propensity model (2010), respondents in 2008.

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=0

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	1215
Number of Observations not in Domain	10574
Sum of Weights in Domain	4942420.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp10	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	4942420
Sum of Weights Used	4942420

Response Profile			
Ordered Value	resp10	Total Frequency	Total Weight
1	0	1033	4032032.0
2	1	182	910388.0

Probability modeled is resp10=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	4722000.1	3980465.8
SC	4722013.5	3980693.8
-2 Log L	4721998.1	3980431.8

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	11.66	11.2236	628.52	<.0001
Score	9.66	16	41	<.0001
Wald	8.96	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.4256 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.02	1	56	0.8971
selfrhealth_06	6.19	4	53	0.0004
age_06	65.53	1	56	<.0001
marcat_06	1.80	2	55	0.1749
diabetes_06	0.79	1	56	0.3785
arthritis_06	0.06	1	56	0.8070
racecat	2.15	3	54	0.1051
edcat	3.73	3	54	0.0165

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	3.8234	1.0685	3.58	0.0007
In_inc06	0.00941	0.0725	0.13	0.8971
selfrhealth_06 2	-0.3388	0.4445	-0.76	0.4492
selfrhealth_06 3	-0.9544	0.4015	-2.38	0.0209
selfrhealth_06 4	-0.9182	0.4636	-1.98	0.0526

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-1.5847	0.4441	-3.57	0.0007
age_06		-0.0712	0.00880	-8.09	<.0001
marcat_06	2	0.1450	0.2113	0.69	0.4954
marcat_06	3	-0.8500	0.5704	-1.49	0.1418
diabetes_06		0.2314	0.2606	0.89	0.3785
arthritis_06		0.0541	0.2205	0.25	0.8070
racecat	2	-0.1699	0.4270	-0.40	0.6922
racecat	3	0.3759	0.3840	0.98	0.3318
racecat	4	0.9791	0.7132	1.37	0.1753
edcat	2	0.2367	0.2881	0.82	0.4148
edcat	3	0.5730	0.2868	2.00	0.0506
edcat	4	-0.4502	0.3015	-1.49	0.1410

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.009	0.873 1.167
selfrhealth_06	2 vs 1	0.713	0.293 1.736
selfrhealth_06	3 vs 1	0.385	0.172 0.861
selfrhealth_06	4 vs 1	0.399	0.158 1.011
selfrhealth_06	5 vs 1	0.205	0.084 0.499
age_06		0.931	0.915 0.948
marcat_06	2 vs 1	1.156	0.757 1.765
marcat_06	3 vs 1	0.427	0.136 1.340
diabetes_06		1.260	0.748 2.124
arthritis_06		1.056	0.679 1.642
racecat	2 vs 1	0.844	0.359 1.985
racecat	3 vs 1	1.456	0.675 3.143
racecat	4 vs 1	2.662	0.638 11.110
edcat	2 vs 1	1.267	0.711 2.257
edcat	3 vs 1	1.774	0.998 3.150
edcat	4 vs 1	0.637	0.348 1.166

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	77.1	Somers' D	0.545
Percent Discordant	22.6	Gamma	0.547
Percent Tied	0.4	Tau-a	0.139
Pairs	188006	c	0.772

Response propensity model (2010), respondents in 2008.

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=1

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	10574
Number of Observations not in Domain	1215
Sum of Weights in Domain	47613567

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp10	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	47613567
Sum of Weights Used	47613567

Response Profile			
Ordered Value	resp10	Total Frequency	Total Weight
1	0	1354	5291546
2	1	9220	42322021

Probability modeled is resp10=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	33223064	30156119
SC	33223079	30156385
-2 Log L	33223062	30156085

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	41.03	10.8871	609.68	<.0001
Score	23.48	16	41	<.0001
Wald	27.09	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.4696 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.29	1	56	0.2604
selfrhealth_06	30.68	4	53	<.0001
age_06	249.72	1	56	<.0001
marcat_06	0.05	2	55	0.9492
diabetes_06	1.99	1	56	0.1636
arthritis_06	13.86	1	56	0.0005
racecat	0.38	3	54	0.7696
edcat	1.25	3	54	0.3008

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.3297	0.4772	13.26	<.0001
In_inc06	0.0350	0.0308	1.14	0.2604
selfrhealth_06 2	-0.1428	0.1771	-0.81	0.4233
selfrhealth_06 3	-0.3484	0.1919	-1.82	0.0747
selfrhealth_06 4	-0.7749	0.1631	-4.75	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-1.3370	0.2016	-6.63	<.0001
age_06		-0.0628	0.00397	-15.80	<.0001
marcat_06	2	-0.0270	0.0831	-0.32	0.7465
marcat_06	3	-0.0147	0.1431	-0.10	0.9187
diabetes_06		-0.1188	0.0842	-1.41	0.1636
arthritis_06		0.2685	0.0721	3.72	0.0005
racecat	2	-0.0543	0.1744	-0.31	0.7566
racecat	3	0.0851	0.1927	0.44	0.6605
racecat	4	-0.0208	0.4022	-0.05	0.9590
edcat	2	0.0706	0.0935	0.76	0.4531
edcat	3	0.1072	0.0828	1.29	0.2008
edcat	4	0.1659	0.1115	1.49	0.1422

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.036	0.974 1.102
selfrhealth_06	2 vs 1	0.867	0.608 1.236
selfrhealth_06	3 vs 1	0.706	0.481 1.037
selfrhealth_06	4 vs 1	0.461	0.332 0.639
selfrhealth_06	5 vs 1	0.263	0.175 0.393
age_06		0.939	0.932 0.947
marcat_06	2 vs 1	0.973	0.824 1.150
marcat_06	3 vs 1	0.985	0.740 1.313
diabetes_06		0.888	0.750 1.051
arthritis_06		1.308	1.132 1.511
racecat	2 vs 1	0.947	0.668 1.343
racecat	3 vs 1	1.089	0.740 1.602
racecat	4 vs 1	0.979	0.438 2.192
edcat	2 vs 1	1.073	0.890 1.294
edcat	3 vs 1	1.113	0.943 1.314
edcat	4 vs 1	1.180	0.944 1.476

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	71.4	Somers' D	0.435
Percent Discordant	27.9	Gamma	0.438
Percent Tied	0.6	Tau-a	0.097
Pairs	12483880	c	0.717

Response propensity model (2010), respondents in 2008.

The MEANS Procedure

Analysis Variable : phat10_11 Estimated Probability					
N	N Miss	Mean	Std Error	Lower 95% CL for Mean	Upper 95% CL for Mean
11789	0	0.8634120	0.000908432	0.8616314	0.8651927

Response propensity model (2010), non respondents in 2008.

The SURVEYLOGISTIC Procedure

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp10	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	52555987
Sum of Weights Used	52555987

Response Profile			
Ordered Value	resp10	Total Frequency	Total Weight
1	0	2387	9323578
2	1	9402	43232409

Probability modeled is resp10=1.

Class Level Information						
Class	Value	Design Variables				
selfrhealth_06	1	0	0	0	0	0
	2	1	0	0	0	0
	3	0	1	0	0	0
	4	0	0	1	0	0
	5	0	0	0	0	1
marcat_06	1	0	0			
	2	1	0			
	3	0	1			
racecat	1	0	0	0		
	2	1	0	0		
	3	0	1	0		
	4	0	0	1		
edcat	1	0	0	0		
	2	1	0	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	49132729	43706079
SC	49132745	43706347
-2 Log L	49132727	43706045

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	80.14	11.3432	635.22	<.0001
Score	36.70	16	41	<.0001
Wald	31.73	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.4105 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.45	1	56	0.2339
selfrhealth_06	66.01	4	53	<.0001
age_06	297.29	1	56	<.0001
marcat_06	3.52	2	55	0.0364
diabetes_06	5.10	1	56	0.0278
arthritis_06	39.11	1	56	<.0001
racecat	0.19	3	54	0.9018
edcat	0.62	3	54	0.6046

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.0712	0.4177	14.53	<.0001
In_inc06	0.0291	0.0241	1.20	0.2339
selfrhealth_06 2	-0.1754	0.1280	-1.37	0.1762
selfrhealth_06 3	-0.4479	0.1394	-3.21	0.0022
selfrhealth_06 4	-0.8735	0.1234	-7.08	<.0001
selfrhealth_06 5	-1.6189	0.1466	-11.04	<.0001
age_06	-0.0641	0.00372	-17.24	<.0001
marcat_06 2	-0.00117	0.0628	-0.02	0.9851
marcat_06 3	-0.2803	0.1134	-2.47	0.0165
diabetes_06	-0.1475	0.0653	-2.26	0.0278
arthritis_06	0.3111	0.0497	6.25	<.0001
racecat 2	-0.0506	0.1218	-0.42	0.6795
racecat 3	0.0227	0.1298	0.18	0.8615

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
racecat	4	-0.0452	0.2847	-0.16	0.8745
edcat	2	0.0490	0.0729	0.67	0.5047
edcat	3	0.0786	0.0752	1.05	0.3003
edcat	4	0.0675	0.0813	0.83	0.4103

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates				
Effect		Point Estimate	95% Confidence Limits	
In_inc06		1.029	0.981	1.080
selfrhealth_06	2 vs 1	0.839	0.649	1.084
selfrhealth_06	3 vs 1	0.639	0.483	0.845
selfrhealth_06	4 vs 1	0.418	0.326	0.535
selfrhealth_06	5 vs 1	0.198	0.148	0.266
age_06		0.938	0.931	0.945
marcat_06	2 vs 1	0.999	0.881	1.133
marcat_06	3 vs 1	0.756	0.602	0.948
diabetes_06		0.863	0.757	0.983
arthritis_06		1.365	1.235	1.508
racecat	2 vs 1	0.951	0.745	1.213
racecat	3 vs 1	1.023	0.789	1.327
racecat	4 vs 1	0.956	0.540	1.691
edcat	2 vs 1	1.050	0.907	1.215
edcat	3 vs 1	1.082	0.931	1.258
edcat	4 vs 1	1.070	0.909	1.259

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	72.7	Somers' D	0.457
Percent Discordant	26.9	Gamma	0.459
Percent Tied	0.4	Tau-a	0.148
Pairs	22442574	c	0.729

Response propensity model (2010), non respondents in 2008.

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=0

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	1215
Number of Observations not in Domain	10574
Sum of Weights in Domain	4942420.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp10	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	4942420
Sum of Weights Used	4942420

Response Profile			
Ordered Value	resp10	Total Frequency	Total Weight
1	0	1033	4032032.0
2	1	182	910388.0

Probability modeled is resp10=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	4722000.1	3980465.8
SC	4722013.5	3980693.8
-2 Log L	4721998.1	3980431.8

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	11.66	11.2236	628.52	<.0001
Score	9.66	16	41	<.0001
Wald	8.96	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.4256 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.02	1	56	0.8971
selfrhealth_06	6.19	4	53	0.0004
age_06	65.53	1	56	<.0001
marcat_06	1.80	2	55	0.1749
diabetes_06	0.79	1	56	0.3785
arthritis_06	0.06	1	56	0.8070
racecat	2.15	3	54	0.1051
edcat	3.73	3	54	0.0165

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	3.8234	1.0685	3.58	0.0007
In_inc06	0.00941	0.0725	0.13	0.8971
selfrhealth_06 2	-0.3388	0.4445	-0.76	0.4492
selfrhealth_06 3	-0.9544	0.4015	-2.38	0.0209
selfrhealth_06 4	-0.9182	0.4636	-1.98	0.0526

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-1.5847	0.4441	-3.57	0.0007
age_06		-0.0712	0.00880	-8.09	<.0001
marcat_06	2	0.1450	0.2113	0.69	0.4954
marcat_06	3	-0.8500	0.5704	-1.49	0.1418
diabetes_06		0.2314	0.2606	0.89	0.3785
arthritis_06		0.0541	0.2205	0.25	0.8070
racecat	2	-0.1699	0.4270	-0.40	0.6922
racecat	3	0.3759	0.3840	0.98	0.3318
racecat	4	0.9791	0.7132	1.37	0.1753
edcat	2	0.2367	0.2881	0.82	0.4148
edcat	3	0.5730	0.2868	2.00	0.0506
edcat	4	-0.4502	0.3015	-1.49	0.1410

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.009	0.873 1.167
selfrhealth_06	2 vs 1	0.713	0.293 1.736
selfrhealth_06	3 vs 1	0.385	0.172 0.861
selfrhealth_06	4 vs 1	0.399	0.158 1.011
selfrhealth_06	5 vs 1	0.205	0.084 0.499
age_06		0.931	0.915 0.948
marcat_06	2 vs 1	1.156	0.757 1.765
marcat_06	3 vs 1	0.427	0.136 1.340
diabetes_06		1.260	0.748 2.124
arthritis_06		1.056	0.679 1.642
racecat	2 vs 1	0.844	0.359 1.985
racecat	3 vs 1	1.456	0.675 3.143
racecat	4 vs 1	2.662	0.638 11.110
edcat	2 vs 1	1.267	0.711 2.257
edcat	3 vs 1	1.774	0.998 3.150
edcat	4 vs 1	0.637	0.348 1.166

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	77.1	Somers' D	0.545
Percent Discordant	22.6	Gamma	0.547
Percent Tied	0.4	Tau-a	0.139
Pairs	188006	c	0.772

Response propensity model (2010), non respondents in 2008.

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=1

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	10574
Number of Observations not in Domain	1215
Sum of Weights in Domain	47613567

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp10	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	47613567
Sum of Weights Used	47613567

Response Profile			
Ordered Value	resp10	Total Frequency	Total Weight
1	0	1354	5291546
2	1	9220	42322021

Probability modeled is resp10=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	33223064	30156119
SC	33223079	30156385
-2 Log L	33223062	30156085

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	41.03	10.8871	609.68	<.0001
Score	23.48	16	41	<.0001
Wald	27.09	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.4696 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.29	1	56	0.2604
selfrhealth_06	30.68	4	53	<.0001
age_06	249.72	1	56	<.0001
marcat_06	0.05	2	55	0.9492
diabetes_06	1.99	1	56	0.1636
arthritis_06	13.86	1	56	0.0005
racecat	0.38	3	54	0.7696
edcat	1.25	3	54	0.3008

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.3297	0.4772	13.26	<.0001
In_inc06	0.0350	0.0308	1.14	0.2604
selfrhealth_06 2	-0.1428	0.1771	-0.81	0.4233
selfrhealth_06 3	-0.3484	0.1919	-1.82	0.0747
selfrhealth_06 4	-0.7749	0.1631	-4.75	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-1.3370	0.2016	-6.63	<.0001
age_06		-0.0628	0.00397	-15.80	<.0001
marcat_06	2	-0.0270	0.0831	-0.32	0.7465
marcat_06	3	-0.0147	0.1431	-0.10	0.9187
diabetes_06		-0.1188	0.0842	-1.41	0.1636
arthritis_06		0.2685	0.0721	3.72	0.0005
racecat	2	-0.0543	0.1744	-0.31	0.7566
racecat	3	0.0851	0.1927	0.44	0.6605
racecat	4	-0.0208	0.4022	-0.05	0.9590
edcat	2	0.0706	0.0935	0.76	0.4531
edcat	3	0.1072	0.0828	1.29	0.2008
edcat	4	0.1659	0.1115	1.49	0.1422

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.036	0.974 1.102
selfrhealth_06	2 vs 1	0.867	0.608 1.236
selfrhealth_06	3 vs 1	0.706	0.481 1.037
selfrhealth_06	4 vs 1	0.461	0.332 0.639
selfrhealth_06	5 vs 1	0.263	0.175 0.393
age_06		0.939	0.932 0.947
marcat_06	2 vs 1	0.973	0.824 1.150
marcat_06	3 vs 1	0.985	0.740 1.313
diabetes_06		0.888	0.750 1.051
arthritis_06		1.308	1.132 1.511
racecat	2 vs 1	0.947	0.668 1.343
racecat	3 vs 1	1.089	0.740 1.602
racecat	4 vs 1	0.979	0.438 2.192
edcat	2 vs 1	1.073	0.890 1.294
edcat	3 vs 1	1.113	0.943 1.314
edcat	4 vs 1	1.180	0.944 1.476

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	71.4	Somers' D	0.435
Percent Discordant	27.9	Gamma	0.438
Percent Tied	0.6	Tau-a	0.097
Pairs	12483880	c	0.717

Response propensity model (2010), non respondents in 2008.

The MEANS Procedure

Analysis Variable : phat10_10 Estimated Probability					
N	N Miss	Mean	Std Error	Lower 95% CL for Mean	Upper 95% CL for Mean
11789	0	0.2075541	0.0013233	0.2049602	0.2101480

Response propensity model (2012), 111 Pattern (06,08,10)

The SURVEYLOGISTIC Procedure

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	52555987
Sum of Weights Used	52555987

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	3229	12855026
2	1	8560	39700961

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	

Class Level Information					
Class	Value	Design Variables			
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	58475989	51716914
SC	58476004	51717182
-2 Log L	58475987	51716880

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	100.40	11.2501	630.01	<.0001
Score	48.06	16	41	<.0001
Wald	35.25	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.4222 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.36	1	56	0.5494
selfrhealth_06	51.89	4	53	<.0001
age_06	358.56	1	56	<.0001
marcat_06	4.04	2	55	0.0231
diabetes_06	13.45	1	56	0.0005
arthritis_06	21.69	1	56	<.0001
racecat	1.56	3	54	0.2099
edcat	0.10	3	54	0.9605

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.1667	0.3939	15.66	<.0001
In_inc06	0.0145	0.0241	0.60	0.5494
selfrhealth_06 2	-0.2030	0.1061	-1.91	0.0608
selfrhealth_06 3	-0.4741	0.1102	-4.30	<.0001
selfrhealth_06 4	-0.8706	0.1097	-7.93	<.0001
selfrhealth_06 5	-1.5873	0.1395	-11.38	<.0001
age_06	-0.0660	0.00348	-18.94	<.0001
marcat_06 2	-0.1154	0.0602	-1.92	0.0603
marcat_06 3	-0.2831	0.1125	-2.52	0.0148
diabetes_06	-0.1684	0.0459	-3.67	0.0005
arthritis_06	0.2612	0.0561	4.66	<.0001
racecat 2	-0.2037	0.0929	-2.19	0.0325
racecat 3	-0.1793	0.1143	-1.57	0.1225

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
racecat	4	-0.1739	0.1903	-0.91	0.3646
edcat	2	0.0341	0.0677	0.50	0.6162
edcat	3	0.00588	0.0684	0.09	0.9318
edcat	4	0.0122	0.0719	0.17	0.8656

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates				
Effect		Point Estimate	95% Confidence Limits	
In_inc06		1.015	0.967	1.065
selfrhealth_06	2 vs 1	0.816	0.660	1.010
selfrhealth_06	3 vs 1	0.622	0.499	0.776
selfrhealth_06	4 vs 1	0.419	0.336	0.522
selfrhealth_06	5 vs 1	0.204	0.155	0.270
age_06		0.936	0.930	0.943
marcat_06	2 vs 1	0.891	0.790	1.005
marcat_06	3 vs 1	0.753	0.601	0.944
diabetes_06		0.845	0.771	0.926
arthritis_06		1.298	1.160	1.453
racecat	2 vs 1	0.816	0.677	0.983
racecat	3 vs 1	0.836	0.665	1.051
racecat	4 vs 1	0.840	0.574	1.230
edcat	2 vs 1	1.035	0.904	1.185
edcat	3 vs 1	1.006	0.877	1.154
edcat	4 vs 1	1.012	0.876	1.169

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	73.1	Somers' D	0.465
Percent Discordant	26.6	Gamma	0.467
Percent Tied	0.3	Tau-a	0.185
Pairs	27640240	c	0.733

Response propensity model (2012), 111 Pattern (06,08,10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=0 resp10=0

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	1033
Number of Observations not in Domain	10756
Sum of Weights in Domain	4032032.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	4032032
Sum of Weights Used	4032032

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	983	3823167.0
2	1	50	208865.0

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	1643342.5	1256288.9
SC	1643355.7	1256513.5
-2 Log L	1643340.5	1256254.9

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	6.35	12.2143	684.00	<.0001
Score	7.41	16	41	<.0001
Wald	3.77	16	41	0.0003

NOTE: Second-order Rao-Scott design correction 0.3099 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.27	1	56	0.6046
selfrhealth_06	5.37	4	53	0.0010
age_06	16.57	1	56	0.0001
marcat_06	1.24	2	55	0.2979
diabetes_06	0.00	1	56	0.9729
arthritis_06	0.07	1	56	0.7940
racecat	3.02	3	54	0.0374
edcat	1.14	3	54	0.3416

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	1.5677	1.9920	0.79	0.4346
In_inc06	0.0792	0.1522	0.52	0.6046
selfrhealth_06 2	0.0332	0.5701	0.06	0.9538
selfrhealth_06 3	-1.5411	0.6558	-2.35	0.0223
selfrhealth_06 4	-1.7387	0.7354	-2.36	0.0216

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-2.1004	0.8660	-2.43	0.0185
age_06		-0.0550	0.0135	-4.07	0.0001
marcat_06	2	-0.6456	0.4176	-1.55	0.1278
marcat_06	3	-0.1815	0.6327	-0.29	0.7753
diabetes_06		-0.0193	0.5657	-0.03	0.9729
arthritis_06		0.0868	0.3308	0.26	0.7940
racecat	2	-0.8103	0.7599	-1.07	0.2909
racecat	3	0.6911	0.7056	0.98	0.3316
racecat	4	0.2037	0.9461	0.22	0.8303
edcat	2	-0.1429	0.6336	-0.23	0.8223
edcat	3	-0.2196	0.7437	-0.30	0.7689
edcat	4	0.4785	0.6908	0.69	0.4914

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.082	0.798 1.468
selfrhealth_06	2 vs 1	1.034	0.330 3.239
selfrhealth_06	3 vs 1	0.214	0.058 0.797
selfrhealth_06	4 vs 1	0.176	0.040 0.767
selfrhealth_06	5 vs 1	0.122	0.022 0.694
age_06		0.946	0.921 0.972
marcat_06	2 vs 1	0.524	0.227 1.210
marcat_06	3 vs 1	0.834	0.235 2.962
diabetes_06		0.981	0.316 3.046
arthritis_06		1.091	0.562 2.116
racecat	2 vs 1	0.445	0.097 2.038
racecat	3 vs 1	1.996	0.486 8.204
racecat	4 vs 1	1.226	0.184 8.158
edcat	2 vs 1	0.867	0.244 3.084
edcat	3 vs 1	0.803	0.181 3.562
edcat	4 vs 1	1.614	0.404 6.439

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	80.3	Somers' D	0.620
Percent Discordant	18.3	Gamma	0.628
Percent Tied	1.4	Tau-a	0.057
Pairs	49150	c	0.810

Response propensity model (2012), 111 Pattern (06,08,10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=0 resp10=1

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	182
Number of Observations not in Domain	11607
Sum of Weights in Domain	910388.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	910388
Sum of Weights Used	910388

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	44	212871.00
2	1	138	697517.00

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	990242.62	843291.77
SC	990254.34	843491.03
-2 Log L	990240.62	843257.77

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	1.77	11.7554	658.30	0.0506
Score	1.03	16	41	0.4438
Wald	2.03	16	41	0.0343

NOTE: Second-order Rao-Scott design correction 0.3611 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.38	1	56	0.2447
selfrhealth_06	1.27	4	53	0.2916
age_06	0.48	1	56	0.4899
marcat_06	1.71	2	55	0.1903
diabetes_06	0.92	1	56	0.3419
arthritis_06	1.75	1	56	0.1911
racecat	2.25	3	54	0.0933
edcat	1.51	3	54	0.2234

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	1.4105	1.9785	0.71	0.4789
In_inc06	0.1632	0.1388	1.18	0.2447
selfrhealth_06 2	0.8691	0.9398	0.92	0.3591
selfrhealth_06 3	0.1614	0.9404	0.17	0.8643
selfrhealth_06 4	0.0253	0.8400	0.03	0.9761

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	1.4361	1.1199	1.28	0.2050
age_06		-0.0149	0.0215	-0.70	0.4899
marcat_06	2	-0.7220	0.4689	-1.54	0.1293
marcat_06	3	0.3602	1.1034	0.33	0.7453
diabetes_06		-0.4215	0.4397	-0.96	0.3419
arthritis_06		-0.6440	0.4867	-1.32	0.1911
racecat	2	-0.8599	0.7553	-1.14	0.2597
racecat	3	-0.4252	0.8983	-0.47	0.6378
racecat	4	-2.3458	0.9736	-2.41	0.0193
edcat	2	0.6592	0.5223	1.26	0.2121
edcat	3	0.5940	0.5405	1.10	0.2765
edcat	4	-0.3719	0.6760	-0.55	0.5844

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.177	0.891 1.555
selfrhealth_06	2 vs 1	2.385	0.363 15.670
selfrhealth_06	3 vs 1	1.175	0.179 7.731
selfrhealth_06	4 vs 1	1.026	0.191 5.518
selfrhealth_06	5 vs 1	4.204	0.446 39.623
age_06		0.985	0.944 1.029
marcat_06	2 vs 1	0.486	0.190 1.243
marcat_06	3 vs 1	1.434	0.157 13.073
diabetes_06		0.656	0.272 1.583
arthritis_06		0.525	0.198 1.392
racecat	2 vs 1	0.423	0.093 1.921
racecat	3 vs 1	0.654	0.108 3.952
racecat	4 vs 1	0.096	0.014 0.673
edcat	2 vs 1	1.933	0.679 5.504
edcat	3 vs 1	1.811	0.613 5.348
edcat	4 vs 1	0.689	0.178 2.671

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	67.1	Somers' D	0.347
Percent Discordant	32.5	Gamma	0.348
Percent Tied	0.4	Tau-a	0.128
Pairs	6072	c	0.673

Response propensity model (2012), 111 Pattern (06,08,10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=1 resp10=0

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	1354
Number of Observations not in Domain	10435
Sum of Weights in Domain	5291546.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	5291546
Sum of Weights Used	5291546

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	1227	4755792.0
2	1	127	535754.0

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	3469294.6	3066705.6
SC	3469308.1	3066934.8
-2 Log L	3469292.6	3066671.6

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	6.60	11.5801	648.49	<.0001
Score	4.35	16	41	<.0001
Wald	4.96	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.3817 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.34	1	56	0.5613
selfrhealth_06	1.87	4	53	0.1291
age_06	22.89	1	56	<.0001
marcat_06	6.85	2	55	0.0022
diabetes_06	3.64	1	56	0.0615
arthritis_06	2.04	1	56	0.1584
racecat	2.22	3	54	0.0966
edcat	0.03	3	54	0.9926

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	3.0384	1.1037	2.75	0.0079
In_inc06	-0.0428	0.0733	-0.58	0.5613
selfrhealth_06 2	0.1799	0.5173	0.35	0.7294
selfrhealth_06 3	-0.2172	0.5130	-0.42	0.6737
selfrhealth_06 4	-0.3029	0.6171	-0.49	0.6255

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-1.2973	0.7174	-1.81	0.0759
age_06		-0.0519	0.0108	-4.78	<.0001
marcat_06	2	-0.7657	0.2714	-2.82	0.0066
marcat_06	3	-2.2658	0.7551	-3.00	0.0040
diabetes_06		-0.5591	0.2930	-1.91	0.0615
arthritis_06		0.4431	0.3099	1.43	0.1584
racecat	2	-0.7649	0.3304	-2.32	0.0243
racecat	3	-0.7076	0.3911	-1.81	0.0758
racecat	4	-1.1450	0.7126	-1.61	0.1137
edcat	2	0.0303	0.2476	0.12	0.9030
edcat	3	-0.00705	0.3073	-0.02	0.9818
edcat	4	-0.0918	0.3669	-0.25	0.8033

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		0.958	0.827 1.110
selfrhealth_06	2 vs 1	1.197	0.425 3.374
selfrhealth_06	3 vs 1	0.805	0.288 2.249
selfrhealth_06	4 vs 1	0.739	0.215 2.543
selfrhealth_06	5 vs 1	0.273	0.065 1.150
age_06		0.949	0.929 0.970
marcat_06	2 vs 1	0.465	0.270 0.801
marcat_06	3 vs 1	0.104	0.023 0.471
diabetes_06		0.572	0.318 1.028
arthritis_06		1.558	0.837 2.898
racecat	2 vs 1	0.465	0.240 0.902
racecat	3 vs 1	0.493	0.225 1.079
racecat	4 vs 1	0.318	0.076 1.326
edcat	2 vs 1	1.031	0.628 1.693
edcat	3 vs 1	0.993	0.537 1.838
edcat	4 vs 1	0.912	0.437 1.902

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	73.7	Somers' D	0.481
Percent Discordant	25.6	Gamma	0.485
Percent Tied	0.8	Tau-a	0.082
Pairs	155829	c	0.740

Response propensity model (2012), 111 Pattern (06,08,10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=1 resp10=1

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	9220
Number of Observations not in Domain	2569
Sum of Weights in Domain	42322021

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	42322021
Sum of Weights Used	42322021

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	975	4063196
2	1	8245	38258825

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		
	3	0	1		

Class Level Information					
Class	Value	Design Variables			
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	26766061	25386275
SC	26766076	25386539
-2 Log L	26766059	25386241

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	18.87	11.8470	663.43	<.0001
Score	9.63	16	41	<.0001
Wald	8.65	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.3506 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.17	1	56	0.2831
selfrhealth_06	6.71	4	53	0.0002
age_06	100.13	1	56	<.0001
marcat_06	1.50	2	55	0.2330
diabetes_06	0.88	1	56	0.3520
arthritis_06	1.03	1	56	0.3142
racecat	2.39	3	54	0.0789
edcat	0.19	3	54	0.9027

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.9422	0.6019	11.53	<.0001
In_inc06	-0.0421	0.0389	-1.08	0.2831
selfrhealth_06 2	-0.2737	0.1716	-1.59	0.1164
selfrhealth_06 3	-0.3708	0.1744	-2.13	0.0379
selfrhealth_06 4	-0.6410	0.1847	-3.47	0.0010
selfrhealth_06 5	-1.0594	0.2212	-4.79	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
age_06		-0.0526	0.00526	-10.01	<.0001
marcat_06	2	-0.1396	0.0810	-1.72	0.0904
marcat_06	3	-0.0775	0.2756	-0.28	0.7797
diabetes_06		-0.0916	0.0976	-0.94	0.3520
arthritis_06		0.1036	0.1020	1.02	0.3142
racecat	2	-0.2481	0.1391	-1.78	0.0800
racecat	3	-0.3814	0.1415	-2.70	0.0093
racecat	4	0.0263	0.2234	0.12	0.9066
edcat	2	-0.0197	0.1025	-0.19	0.8486
edcat	3	-0.0856	0.1171	-0.73	0.4678
edcat	4	-0.0319	0.1259	-0.25	0.8006

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		0.959	0.887 1.036
selfrhealth_06	2 vs 1	0.761	0.539 1.073
selfrhealth_06	3 vs 1	0.690	0.487 0.979
selfrhealth_06	4 vs 1	0.527	0.364 0.763
selfrhealth_06	5 vs 1	0.347	0.223 0.540
age_06		0.949	0.939 0.959
marcat_06	2 vs 1	0.870	0.739 1.023
marcat_06	3 vs 1	0.925	0.533 1.607
diabetes_06		0.912	0.750 1.110
arthritis_06		1.109	0.904 1.361
racecat	2 vs 1	0.780	0.590 1.031
racecat	3 vs 1	0.683	0.514 0.907
racecat	4 vs 1	1.027	0.656 1.606
edcat	2 vs 1	0.981	0.799 1.204
edcat	3 vs 1	0.918	0.726 1.161
edcat	4 vs 1	0.969	0.753 1.246

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	66.8	Somers' D	0.346
Percent Discordant	32.2	Gamma	0.349
Percent Tied	0.9	Tau-a	0.065
Pairs	8038875	c	0.673

Response propensity model (2012), 111 Pattern (06,08,10)

The MEANS Procedure

Analysis Variable : phat12_111 Estimated Probability					
N	N Miss	Mean	Std Error	Lower 95% CL for Mean	Upper 95% CL for Mean
11789	0	0.8779838	0.000660110	0.8766899	0.8792778

Response propensity model (2012), 110 Pattern (06,08,no 10)

The SURVEYLOGISTIC Procedure

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	52555987
Sum of Weights Used	52555987

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	3229	12855026
2	1	8560	39700961

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	

Class Level Information					
Class	Value	Design Variables			
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	58475989	51716914
SC	58476004	51717182
-2 Log L	58475987	51716880

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	100.40	11.2501	630.01	<.0001
Score	48.06	16	41	<.0001
Wald	35.25	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.4222 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.36	1	56	0.5494
selfrhealth_06	51.89	4	53	<.0001
age_06	358.56	1	56	<.0001
marcat_06	4.04	2	55	0.0231
diabetes_06	13.45	1	56	0.0005
arthritis_06	21.69	1	56	<.0001
racecat	1.56	3	54	0.2099
edcat	0.10	3	54	0.9605

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.1667	0.3939	15.66	<.0001
In_inc06	0.0145	0.0241	0.60	0.5494
selfrhealth_06 2	-0.2030	0.1061	-1.91	0.0608
selfrhealth_06 3	-0.4741	0.1102	-4.30	<.0001
selfrhealth_06 4	-0.8706	0.1097	-7.93	<.0001
selfrhealth_06 5	-1.5873	0.1395	-11.38	<.0001
age_06	-0.0660	0.00348	-18.94	<.0001
marcat_06 2	-0.1154	0.0602	-1.92	0.0603
marcat_06 3	-0.2831	0.1125	-2.52	0.0148
diabetes_06	-0.1684	0.0459	-3.67	0.0005
arthritis_06	0.2612	0.0561	4.66	<.0001
racecat 2	-0.2037	0.0929	-2.19	0.0325
racecat 3	-0.1793	0.1143	-1.57	0.1225

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
racecat	4	-0.1739	0.1903	-0.91	0.3646
edcat	2	0.0341	0.0677	0.50	0.6162
edcat	3	0.00588	0.0684	0.09	0.9318
edcat	4	0.0122	0.0719	0.17	0.8656

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates				
Effect		Point Estimate	95% Confidence Limits	
In_inc06		1.015	0.967	1.065
selfrhealth_06	2 vs 1	0.816	0.660	1.010
selfrhealth_06	3 vs 1	0.622	0.499	0.776
selfrhealth_06	4 vs 1	0.419	0.336	0.522
selfrhealth_06	5 vs 1	0.204	0.155	0.270
age_06		0.936	0.930	0.943
marcat_06	2 vs 1	0.891	0.790	1.005
marcat_06	3 vs 1	0.753	0.601	0.944
diabetes_06		0.845	0.771	0.926
arthritis_06		1.298	1.160	1.453
racecat	2 vs 1	0.816	0.677	0.983
racecat	3 vs 1	0.836	0.665	1.051
racecat	4 vs 1	0.840	0.574	1.230
edcat	2 vs 1	1.035	0.904	1.185
edcat	3 vs 1	1.006	0.877	1.154
edcat	4 vs 1	1.012	0.876	1.169

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	73.1	Somers' D	0.465
Percent Discordant	26.6	Gamma	0.467
Percent Tied	0.3	Tau-a	0.185
Pairs	27640240	c	0.733

Response propensity model (2012), 110 Pattern (06,08,no 10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=0 resp10=0

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	1033
Number of Observations not in Domain	10756
Sum of Weights in Domain	4032032.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	4032032
Sum of Weights Used	4032032

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	983	3823167.0
2	1	50	208865.0

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	1643342.5	1256288.9
SC	1643355.7	1256513.5
-2 Log L	1643340.5	1256254.9

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	6.35	12.2143	684.00	<.0001
Score	7.41	16	41	<.0001
Wald	3.77	16	41	0.0003

NOTE: Second-order Rao-Scott design correction 0.3099 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.27	1	56	0.6046
selfrhealth_06	5.37	4	53	0.0010
age_06	16.57	1	56	0.0001
marcat_06	1.24	2	55	0.2979
diabetes_06	0.00	1	56	0.9729
arthritis_06	0.07	1	56	0.7940
racecat	3.02	3	54	0.0374
edcat	1.14	3	54	0.3416

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	1.5677	1.9920	0.79	0.4346
In_inc06	0.0792	0.1522	0.52	0.6046
selfrhealth_06 2	0.0332	0.5701	0.06	0.9538
selfrhealth_06 3	-1.5411	0.6558	-2.35	0.0223
selfrhealth_06 4	-1.7387	0.7354	-2.36	0.0216

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-2.1004	0.8660	-2.43	0.0185
age_06		-0.0550	0.0135	-4.07	0.0001
marcat_06	2	-0.6456	0.4176	-1.55	0.1278
marcat_06	3	-0.1815	0.6327	-0.29	0.7753
diabetes_06		-0.0193	0.5657	-0.03	0.9729
arthritis_06		0.0868	0.3308	0.26	0.7940
racecat	2	-0.8103	0.7599	-1.07	0.2909
racecat	3	0.6911	0.7056	0.98	0.3316
racecat	4	0.2037	0.9461	0.22	0.8303
edcat	2	-0.1429	0.6336	-0.23	0.8223
edcat	3	-0.2196	0.7437	-0.30	0.7689
edcat	4	0.4785	0.6908	0.69	0.4914

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.082	0.798 1.468
selfrhealth_06	2 vs 1	1.034	0.330 3.239
selfrhealth_06	3 vs 1	0.214	0.058 0.797
selfrhealth_06	4 vs 1	0.176	0.040 0.767
selfrhealth_06	5 vs 1	0.122	0.022 0.694
age_06		0.946	0.921 0.972
marcat_06	2 vs 1	0.524	0.227 1.210
marcat_06	3 vs 1	0.834	0.235 2.962
diabetes_06		0.981	0.316 3.046
arthritis_06		1.091	0.562 2.116
racecat	2 vs 1	0.445	0.097 2.038
racecat	3 vs 1	1.996	0.486 8.204
racecat	4 vs 1	1.226	0.184 8.158
edcat	2 vs 1	0.867	0.244 3.084
edcat	3 vs 1	0.803	0.181 3.562
edcat	4 vs 1	1.614	0.404 6.439

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	80.3	Somers' D	0.620
Percent Discordant	18.3	Gamma	0.628
Percent Tied	1.4	Tau-a	0.057
Pairs	49150	c	0.810

Response propensity model (2012), 110 Pattern (06,08,no 10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=0 resp10=1

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	182
Number of Observations not in Domain	11607
Sum of Weights in Domain	910388.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	910388
Sum of Weights Used	910388

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	44	212871.00
2	1	138	697517.00

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		
	3	0	1		

Class Level Information					
Class	Value	Design Variables			
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	990242.62	843291.77
SC	990254.34	843491.03
-2 Log L	990240.62	843257.77

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	1.77	11.7554	658.30	0.0506
Score	1.03	16	41	0.4438
Wald	2.03	16	41	0.0343

NOTE: Second-order Rao-Scott design correction 0.3611 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.38	1	56	0.2447
selfrhealth_06	1.27	4	53	0.2916
age_06	0.48	1	56	0.4899
marcat_06	1.71	2	55	0.1903
diabetes_06	0.92	1	56	0.3419
arthritis_06	1.75	1	56	0.1911
racecat	2.25	3	54	0.0933
edcat	1.51	3	54	0.2234

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	1.4105	1.9785	0.71	0.4789
In_inc06	0.1632	0.1388	1.18	0.2447
selfrhealth_06 2	0.8691	0.9398	0.92	0.3591
selfrhealth_06 3	0.1614	0.9404	0.17	0.8643
selfrhealth_06 4	0.0253	0.8400	0.03	0.9761
selfrhealth_06 5	1.4361	1.1199	1.28	0.2050

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
age_06		-0.0149	0.0215	-0.70	0.4899
marcat_06	2	-0.7220	0.4689	-1.54	0.1293
marcat_06	3	0.3602	1.1034	0.33	0.7453
diabetes_06		-0.4215	0.4397	-0.96	0.3419
arthritis_06		-0.6440	0.4867	-1.32	0.1911
racecat	2	-0.8599	0.7553	-1.14	0.2597
racecat	3	-0.4252	0.8983	-0.47	0.6378
racecat	4	-2.3458	0.9736	-2.41	0.0193
edcat	2	0.6592	0.5223	1.26	0.2121
edcat	3	0.5940	0.5405	1.10	0.2765
edcat	4	-0.3719	0.6760	-0.55	0.5844

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.177	0.891 1.555
selfrhealth_06 2 vs 1		2.385	0.363 15.670
selfrhealth_06 3 vs 1		1.175	0.179 7.731
selfrhealth_06 4 vs 1		1.026	0.191 5.518
selfrhealth_06 5 vs 1		4.204	0.446 39.623
age_06		0.985	0.944 1.029
marcat_06	2 vs 1	0.486	0.190 1.243
marcat_06	3 vs 1	1.434	0.157 13.073
diabetes_06		0.656	0.272 1.583
arthritis_06		0.525	0.198 1.392
racecat	2 vs 1	0.423	0.093 1.921
racecat	3 vs 1	0.654	0.108 3.952
racecat	4 vs 1	0.096	0.014 0.673
edcat	2 vs 1	1.933	0.679 5.504
edcat	3 vs 1	1.811	0.613 5.348
edcat	4 vs 1	0.689	0.178 2.671

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	67.1	Somers' D	0.347
Percent Discordant	32.5	Gamma	0.348
Percent Tied	0.4	Tau-a	0.128
Pairs	6072	c	0.673

Response propensity model (2012), 110 Pattern (06,08,no 10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=1 resp10=0

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	1354
Number of Observations not in Domain	10435
Sum of Weights in Domain	5291546.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	5291546
Sum of Weights Used	5291546

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	1227	4755792.0
2	1	127	535754.0

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	3469294.6	3066705.6
SC	3469308.1	3066934.8
-2 Log L	3469292.6	3066671.6

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	6.60	11.5801	648.49	<.0001
Score	4.35	16	41	<.0001
Wald	4.96	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.3817 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.34	1	56	0.5613
selfrhealth_06	1.87	4	53	0.1291
age_06	22.89	1	56	<.0001
marcat_06	6.85	2	55	0.0022
diabetes_06	3.64	1	56	0.0615
arthritis_06	2.04	1	56	0.1584
racecat	2.22	3	54	0.0966
edcat	0.03	3	54	0.9926

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	3.0384	1.1037	2.75	0.0079
In_inc06	-0.0428	0.0733	-0.58	0.5613
selfrhealth_06 2	0.1799	0.5173	0.35	0.7294
selfrhealth_06 3	-0.2172	0.5130	-0.42	0.6737
selfrhealth_06 4	-0.3029	0.6171	-0.49	0.6255

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-1.2973	0.7174	-1.81	0.0759
age_06		-0.0519	0.0108	-4.78	<.0001
marcat_06	2	-0.7657	0.2714	-2.82	0.0066
marcat_06	3	-2.2658	0.7551	-3.00	0.0040
diabetes_06		-0.5591	0.2930	-1.91	0.0615
arthritis_06		0.4431	0.3099	1.43	0.1584
racecat	2	-0.7649	0.3304	-2.32	0.0243
racecat	3	-0.7076	0.3911	-1.81	0.0758
racecat	4	-1.1450	0.7126	-1.61	0.1137
edcat	2	0.0303	0.2476	0.12	0.9030
edcat	3	-0.00705	0.3073	-0.02	0.9818
edcat	4	-0.0918	0.3669	-0.25	0.8033

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		0.958	0.827 1.110
selfrhealth_06	2 vs 1	1.197	0.425 3.374
selfrhealth_06	3 vs 1	0.805	0.288 2.249
selfrhealth_06	4 vs 1	0.739	0.215 2.543
selfrhealth_06	5 vs 1	0.273	0.065 1.150
age_06		0.949	0.929 0.970
marcat_06	2 vs 1	0.465	0.270 0.801
marcat_06	3 vs 1	0.104	0.023 0.471
diabetes_06		0.572	0.318 1.028
arthritis_06		1.558	0.837 2.898
racecat	2 vs 1	0.465	0.240 0.902
racecat	3 vs 1	0.493	0.225 1.079
racecat	4 vs 1	0.318	0.076 1.326
edcat	2 vs 1	1.031	0.628 1.693
edcat	3 vs 1	0.993	0.537 1.838
edcat	4 vs 1	0.912	0.437 1.902

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	73.7	Somers' D	0.481
Percent Discordant	25.6	Gamma	0.485
Percent Tied	0.8	Tau-a	0.082
Pairs	155829	c	0.740

Response propensity model (2012), 110 Pattern (06,08,no 10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=1 resp10=1

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	9220
Number of Observations not in Domain	2569
Sum of Weights in Domain	42322021

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	42322021
Sum of Weights Used	42322021

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	975	4063196
2	1	8245	38258825

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	26766061	25386275
SC	26766076	25386539
-2 Log L	26766059	25386241

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	18.87	11.8470	663.43	<.0001
Score	9.63	16	41	<.0001
Wald	8.65	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.3506 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.17	1	56	0.2831
selfrhealth_06	6.71	4	53	0.0002
age_06	100.13	1	56	<.0001
marcat_06	1.50	2	55	0.2330
diabetes_06	0.88	1	56	0.3520
arthritis_06	1.03	1	56	0.3142
racecat	2.39	3	54	0.0789
edcat	0.19	3	54	0.9027

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.9422	0.6019	11.53	<.0001
In_inc06	-0.0421	0.0389	-1.08	0.2831
selfrhealth_06 2	-0.2737	0.1716	-1.59	0.1164
selfrhealth_06 3	-0.3708	0.1744	-2.13	0.0379
selfrhealth_06 4	-0.6410	0.1847	-3.47	0.0010

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-1.0594	0.2212	-4.79	<.0001
age_06		-0.0526	0.00526	-10.01	<.0001
marcat_06	2	-0.1396	0.0810	-1.72	0.0904
marcat_06	3	-0.0775	0.2756	-0.28	0.7797
diabetes_06		-0.0916	0.0976	-0.94	0.3520
arthritis_06		0.1036	0.1020	1.02	0.3142
racecat	2	-0.2481	0.1391	-1.78	0.0800
racecat	3	-0.3814	0.1415	-2.70	0.0093
racecat	4	0.0263	0.2234	0.12	0.9066
edcat	2	-0.0197	0.1025	-0.19	0.8486
edcat	3	-0.0856	0.1171	-0.73	0.4678
edcat	4	-0.0319	0.1259	-0.25	0.8006

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		0.959	0.887 1.036
selfrhealth_06	2 vs 1	0.761	0.539 1.073
selfrhealth_06	3 vs 1	0.690	0.487 0.979
selfrhealth_06	4 vs 1	0.527	0.364 0.763
selfrhealth_06	5 vs 1	0.347	0.223 0.540
age_06		0.949	0.939 0.959
marcat_06	2 vs 1	0.870	0.739 1.023
marcat_06	3 vs 1	0.925	0.533 1.607
diabetes_06		0.912	0.750 1.110
arthritis_06		1.109	0.904 1.361
racecat	2 vs 1	0.780	0.590 1.031
racecat	3 vs 1	0.683	0.514 0.907
racecat	4 vs 1	1.027	0.656 1.606
edcat	2 vs 1	0.981	0.799 1.204
edcat	3 vs 1	0.918	0.726 1.161
edcat	4 vs 1	0.969	0.753 1.246

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	66.8	Somers' D	0.346
Percent Discordant	32.2	Gamma	0.349
Percent Tied	0.9	Tau-a	0.065
Pairs	8038875	c	0.673

Response propensity model (2012), 110 Pattern (06,08,no 10)

The MEANS Procedure

Analysis Variable : phat12_110 Estimated Probability		
N	N Miss	Mean
11789	0	0.1252751

Response propensity model (2012), 101 Pattern (06,no 08,10)

The SURVEYLOGISTIC Procedure

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	52555987
Sum of Weights Used	52555987

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	3229	12855026
2	1	8560	39700961

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	

Class Level Information					
Class	Value	Design Variables			
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	58475989	51716914
SC	58476004	51717182
-2 Log L	58475987	51716880

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	100.40	11.2501	630.01	<.0001
Score	48.06	16	41	<.0001
Wald	35.25	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.4222 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.36	1	56	0.5494
selfrhealth_06	51.89	4	53	<.0001
age_06	358.56	1	56	<.0001
marcat_06	4.04	2	55	0.0231
diabetes_06	13.45	1	56	0.0005
arthritis_06	21.69	1	56	<.0001
racecat	1.56	3	54	0.2099
edcat	0.10	3	54	0.9605

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.1667	0.3939	15.66	<.0001
In_inc06	0.0145	0.0241	0.60	0.5494
selfrhealth_06 2	-0.2030	0.1061	-1.91	0.0608
selfrhealth_06 3	-0.4741	0.1102	-4.30	<.0001
selfrhealth_06 4	-0.8706	0.1097	-7.93	<.0001
selfrhealth_06 5	-1.5873	0.1395	-11.38	<.0001
age_06	-0.0660	0.00348	-18.94	<.0001
marcat_06 2	-0.1154	0.0602	-1.92	0.0603
marcat_06 3	-0.2831	0.1125	-2.52	0.0148
diabetes_06	-0.1684	0.0459	-3.67	0.0005
arthritis_06	0.2612	0.0561	4.66	<.0001
racecat 2	-0.2037	0.0929	-2.19	0.0325
racecat 3	-0.1793	0.1143	-1.57	0.1225

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
racecat	4	-0.1739	0.1903	-0.91	0.3646
edcat	2	0.0341	0.0677	0.50	0.6162
edcat	3	0.00588	0.0684	0.09	0.9318
edcat	4	0.0122	0.0719	0.17	0.8656

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates				
Effect		Point Estimate	95% Confidence Limits	
In_inc06		1.015	0.967	1.065
selfrhealth_06	2 vs 1	0.816	0.660	1.010
selfrhealth_06	3 vs 1	0.622	0.499	0.776
selfrhealth_06	4 vs 1	0.419	0.336	0.522
selfrhealth_06	5 vs 1	0.204	0.155	0.270
age_06		0.936	0.930	0.943
marcat_06	2 vs 1	0.891	0.790	1.005
marcat_06	3 vs 1	0.753	0.601	0.944
diabetes_06		0.845	0.771	0.926
arthritis_06		1.298	1.160	1.453
racecat	2 vs 1	0.816	0.677	0.983
racecat	3 vs 1	0.836	0.665	1.051
racecat	4 vs 1	0.840	0.574	1.230
edcat	2 vs 1	1.035	0.904	1.185
edcat	3 vs 1	1.006	0.877	1.154
edcat	4 vs 1	1.012	0.876	1.169

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	73.1	Somers' D	0.465
Percent Discordant	26.6	Gamma	0.467
Percent Tied	0.3	Tau-a	0.185
Pairs	27640240	c	0.733

Response propensity model (2012), 101 Pattern (06,no 08,10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=0 resp10=0

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	1033
Number of Observations not in Domain	10756
Sum of Weights in Domain	4032032.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	4032032
Sum of Weights Used	4032032

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	983	3823167.0
2	1	50	208865.0

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	1643342.5	1256288.9
SC	1643355.7	1256513.5
-2 Log L	1643340.5	1256254.9

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	6.35	12.2143	684.00	<.0001
Score	7.41	16	41	<.0001
Wald	3.77	16	41	0.0003

NOTE: Second-order Rao-Scott design correction 0.3099 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.27	1	56	0.6046
selfrhealth_06	5.37	4	53	0.0010
age_06	16.57	1	56	0.0001
marcat_06	1.24	2	55	0.2979
diabetes_06	0.00	1	56	0.9729
arthritis_06	0.07	1	56	0.7940
racecat	3.02	3	54	0.0374
edcat	1.14	3	54	0.3416

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	1.5677	1.9920	0.79	0.4346
In_inc06	0.0792	0.1522	0.52	0.6046
selfrhealth_06 2	0.0332	0.5701	0.06	0.9538
selfrhealth_06 3	-1.5411	0.6558	-2.35	0.0223
selfrhealth_06 4	-1.7387	0.7354	-2.36	0.0216

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-2.1004	0.8660	-2.43	0.0185
age_06		-0.0550	0.0135	-4.07	0.0001
marcat_06	2	-0.6456	0.4176	-1.55	0.1278
marcat_06	3	-0.1815	0.6327	-0.29	0.7753
diabetes_06		-0.0193	0.5657	-0.03	0.9729
arthritis_06		0.0868	0.3308	0.26	0.7940
racecat	2	-0.8103	0.7599	-1.07	0.2909
racecat	3	0.6911	0.7056	0.98	0.3316
racecat	4	0.2037	0.9461	0.22	0.8303
edcat	2	-0.1429	0.6336	-0.23	0.8223
edcat	3	-0.2196	0.7437	-0.30	0.7689
edcat	4	0.4785	0.6908	0.69	0.4914

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.082	0.798 1.468
selfrhealth_06	2 vs 1	1.034	0.330 3.239
selfrhealth_06	3 vs 1	0.214	0.058 0.797
selfrhealth_06	4 vs 1	0.176	0.040 0.767
selfrhealth_06	5 vs 1	0.122	0.022 0.694
age_06		0.946	0.921 0.972
marcat_06	2 vs 1	0.524	0.227 1.210
marcat_06	3 vs 1	0.834	0.235 2.962
diabetes_06		0.981	0.316 3.046
arthritis_06		1.091	0.562 2.116
racecat	2 vs 1	0.445	0.097 2.038
racecat	3 vs 1	1.996	0.486 8.204
racecat	4 vs 1	1.226	0.184 8.158
edcat	2 vs 1	0.867	0.244 3.084
edcat	3 vs 1	0.803	0.181 3.562
edcat	4 vs 1	1.614	0.404 6.439

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	80.3	Somers' D	0.620
Percent Discordant	18.3	Gamma	0.628
Percent Tied	1.4	Tau-a	0.057
Pairs	49150	c	0.810

Response propensity model (2012), 101 Pattern (06,no 08,10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=0 resp10=1

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	182
Number of Observations not in Domain	11607
Sum of Weights in Domain	910388.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	910388
Sum of Weights Used	910388

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	44	212871.00
2	1	138	697517.00

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		
	3	0	1		

Class Level Information					
Class	Value	Design Variables			
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	990242.62	843291.77
SC	990254.34	843491.03
-2 Log L	990240.62	843257.77

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	1.77	11.7554	658.30	0.0506
Score	1.03	16	41	0.4438
Wald	2.03	16	41	0.0343

NOTE: Second-order Rao-Scott design correction 0.3611 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.38	1	56	0.2447
selfrhealth_06	1.27	4	53	0.2916
age_06	0.48	1	56	0.4899
marcat_06	1.71	2	55	0.1903
diabetes_06	0.92	1	56	0.3419
arthritis_06	1.75	1	56	0.1911
racecat	2.25	3	54	0.0933
edcat	1.51	3	54	0.2234

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	1.4105	1.9785	0.71	0.4789
In_inc06	0.1632	0.1388	1.18	0.2447
selfrhealth_06 2	0.8691	0.9398	0.92	0.3591
selfrhealth_06 3	0.1614	0.9404	0.17	0.8643
selfrhealth_06 4	0.0253	0.8400	0.03	0.9761
selfrhealth_06 5	1.4361	1.1199	1.28	0.2050

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
age_06		-0.0149	0.0215	-0.70	0.4899
marcat_06	2	-0.7220	0.4689	-1.54	0.1293
marcat_06	3	0.3602	1.1034	0.33	0.7453
diabetes_06		-0.4215	0.4397	-0.96	0.3419
arthritis_06		-0.6440	0.4867	-1.32	0.1911
racecat	2	-0.8599	0.7553	-1.14	0.2597
racecat	3	-0.4252	0.8983	-0.47	0.6378
racecat	4	-2.3458	0.9736	-2.41	0.0193
edcat	2	0.6592	0.5223	1.26	0.2121
edcat	3	0.5940	0.5405	1.10	0.2765
edcat	4	-0.3719	0.6760	-0.55	0.5844

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.177	0.891 1.555
selfrhealth_06 2 vs 1		2.385	0.363 15.670
selfrhealth_06 3 vs 1		1.175	0.179 7.731
selfrhealth_06 4 vs 1		1.026	0.191 5.518
selfrhealth_06 5 vs 1		4.204	0.446 39.623
age_06		0.985	0.944 1.029
marcat_06	2 vs 1	0.486	0.190 1.243
marcat_06	3 vs 1	1.434	0.157 13.073
diabetes_06		0.656	0.272 1.583
arthritis_06		0.525	0.198 1.392
racecat	2 vs 1	0.423	0.093 1.921
racecat	3 vs 1	0.654	0.108 3.952
racecat	4 vs 1	0.096	0.014 0.673
edcat	2 vs 1	1.933	0.679 5.504
edcat	3 vs 1	1.811	0.613 5.348
edcat	4 vs 1	0.689	0.178 2.671

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	67.1	Somers' D	0.347
Percent Discordant	32.5	Gamma	0.348
Percent Tied	0.4	Tau-a	0.128
Pairs	6072	c	0.673

Response propensity model (2012), 101 Pattern (06,no 08,10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=1 resp10=0

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	1354
Number of Observations not in Domain	10435
Sum of Weights in Domain	5291546.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	5291546
Sum of Weights Used	5291546

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	1227	4755792.0
2	1	127	535754.0

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	3469294.6	3066705.6
SC	3469308.1	3066934.8
-2 Log L	3469292.6	3066671.6

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	6.60	11.5801	648.49	<.0001
Score	4.35	16	41	<.0001
Wald	4.96	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.3817 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.34	1	56	0.5613
selfrhealth_06	1.87	4	53	0.1291
age_06	22.89	1	56	<.0001
marcat_06	6.85	2	55	0.0022
diabetes_06	3.64	1	56	0.0615
arthritis_06	2.04	1	56	0.1584
racecat	2.22	3	54	0.0966
edcat	0.03	3	54	0.9926

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	3.0384	1.1037	2.75	0.0079
In_inc06	-0.0428	0.0733	-0.58	0.5613
selfrhealth_06 2	0.1799	0.5173	0.35	0.7294
selfrhealth_06 3	-0.2172	0.5130	-0.42	0.6737
selfrhealth_06 4	-0.3029	0.6171	-0.49	0.6255

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-1.2973	0.7174	-1.81	0.0759
age_06		-0.0519	0.0108	-4.78	<.0001
marcat_06	2	-0.7657	0.2714	-2.82	0.0066
marcat_06	3	-2.2658	0.7551	-3.00	0.0040
diabetes_06		-0.5591	0.2930	-1.91	0.0615
arthritis_06		0.4431	0.3099	1.43	0.1584
racecat	2	-0.7649	0.3304	-2.32	0.0243
racecat	3	-0.7076	0.3911	-1.81	0.0758
racecat	4	-1.1450	0.7126	-1.61	0.1137
edcat	2	0.0303	0.2476	0.12	0.9030
edcat	3	-0.00705	0.3073	-0.02	0.9818
edcat	4	-0.0918	0.3669	-0.25	0.8033

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		0.958	0.827 1.110
selfrhealth_06	2 vs 1	1.197	0.425 3.374
selfrhealth_06	3 vs 1	0.805	0.288 2.249
selfrhealth_06	4 vs 1	0.739	0.215 2.543
selfrhealth_06	5 vs 1	0.273	0.065 1.150
age_06		0.949	0.929 0.970
marcat_06	2 vs 1	0.465	0.270 0.801
marcat_06	3 vs 1	0.104	0.023 0.471
diabetes_06		0.572	0.318 1.028
arthritis_06		1.558	0.837 2.898
racecat	2 vs 1	0.465	0.240 0.902
racecat	3 vs 1	0.493	0.225 1.079
racecat	4 vs 1	0.318	0.076 1.326
edcat	2 vs 1	1.031	0.628 1.693
edcat	3 vs 1	0.993	0.537 1.838
edcat	4 vs 1	0.912	0.437 1.902

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	73.7	Somers' D	0.481
Percent Discordant	25.6	Gamma	0.485
Percent Tied	0.8	Tau-a	0.082
Pairs	155829	c	0.740

Response propensity model (2012), 101 Pattern (06,no 08,10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=1 resp10=1

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	9220
Number of Observations not in Domain	2569
Sum of Weights in Domain	42322021

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	42322021
Sum of Weights Used	42322021

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	975	4063196
2	1	8245	38258825

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		
	3	0	1		

Class Level Information					
Class	Value	Design Variables			
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	26766061	25386275
SC	26766076	25386539
-2 Log L	26766059	25386241

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	18.87	11.8470	663.43	<.0001
Score	9.63	16	41	<.0001
Wald	8.65	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.3506 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.17	1	56	0.2831
selfrhealth_06	6.71	4	53	0.0002
age_06	100.13	1	56	<.0001
marcat_06	1.50	2	55	0.2330
diabetes_06	0.88	1	56	0.3520
arthritis_06	1.03	1	56	0.3142
racecat	2.39	3	54	0.0789
edcat	0.19	3	54	0.9027

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.9422	0.6019	11.53	<.0001
In_inc06	-0.0421	0.0389	-1.08	0.2831
selfrhealth_06 2	-0.2737	0.1716	-1.59	0.1164
selfrhealth_06 3	-0.3708	0.1744	-2.13	0.0379
selfrhealth_06 4	-0.6410	0.1847	-3.47	0.0010
selfrhealth_06 5	-1.0594	0.2212	-4.79	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
age_06		-0.0526	0.00526	-10.01	<.0001
marcat_06	2	-0.1396	0.0810	-1.72	0.0904
marcat_06	3	-0.0775	0.2756	-0.28	0.7797
diabetes_06		-0.0916	0.0976	-0.94	0.3520
arthritis_06		0.1036	0.1020	1.02	0.3142
racecat	2	-0.2481	0.1391	-1.78	0.0800
racecat	3	-0.3814	0.1415	-2.70	0.0093
racecat	4	0.0263	0.2234	0.12	0.9066
edcat	2	-0.0197	0.1025	-0.19	0.8486
edcat	3	-0.0856	0.1171	-0.73	0.4678
edcat	4	-0.0319	0.1259	-0.25	0.8006

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		0.959	0.887 1.036
selfrhealth_06	2 vs 1	0.761	0.539 1.073
selfrhealth_06	3 vs 1	0.690	0.487 0.979
selfrhealth_06	4 vs 1	0.527	0.364 0.763
selfrhealth_06	5 vs 1	0.347	0.223 0.540
age_06		0.949	0.939 0.959
marcat_06	2 vs 1	0.870	0.739 1.023
marcat_06	3 vs 1	0.925	0.533 1.607
diabetes_06		0.912	0.750 1.110
arthritis_06		1.109	0.904 1.361
racecat	2 vs 1	0.780	0.590 1.031
racecat	3 vs 1	0.683	0.514 0.907
racecat	4 vs 1	1.027	0.656 1.606
edcat	2 vs 1	0.981	0.799 1.204
edcat	3 vs 1	0.918	0.726 1.161
edcat	4 vs 1	0.969	0.753 1.246

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	66.8	Somers' D	0.346
Percent Discordant	32.2	Gamma	0.349
Percent Tied	0.9	Tau-a	0.065
Pairs	8038875	c	0.673

Response propensity model (2012), 101 Pattern (06,no 08,10)

The MEANS Procedure

Analysis Variable : phat12_101 Estimated Probability			
N	N Miss	Mean	Std Error
11789	0	0.7265938	0.0015379

Response propensity model (2012), 100 Pattern (06,no 08,no 10)

The SURVEYLOGISTIC Procedure

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	52555987
Sum of Weights Used	52555987

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	3229	12855026
2	1	8560	39700961

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	

Class Level Information					
Class	Value	Design Variables			
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	58475989	51716914
SC	58476004	51717182
-2 Log L	58475987	51716880

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	100.40	11.2501	630.01	<.0001
Score	48.06	16	41	<.0001
Wald	35.25	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.4222 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.36	1	56	0.5494
selfrhealth_06	51.89	4	53	<.0001
age_06	358.56	1	56	<.0001
marcat_06	4.04	2	55	0.0231
diabetes_06	13.45	1	56	0.0005
arthritis_06	21.69	1	56	<.0001
racecat	1.56	3	54	0.2099
edcat	0.10	3	54	0.9605

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.1667	0.3939	15.66	<.0001
In_inc06	0.0145	0.0241	0.60	0.5494
selfrhealth_06 2	-0.2030	0.1061	-1.91	0.0608
selfrhealth_06 3	-0.4741	0.1102	-4.30	<.0001
selfrhealth_06 4	-0.8706	0.1097	-7.93	<.0001
selfrhealth_06 5	-1.5873	0.1395	-11.38	<.0001
age_06	-0.0660	0.00348	-18.94	<.0001
marcat_06 2	-0.1154	0.0602	-1.92	0.0603
marcat_06 3	-0.2831	0.1125	-2.52	0.0148
diabetes_06	-0.1684	0.0459	-3.67	0.0005
arthritis_06	0.2612	0.0561	4.66	<.0001
racecat 2	-0.2037	0.0929	-2.19	0.0325
racecat 3	-0.1793	0.1143	-1.57	0.1225

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
racecat	4	-0.1739	0.1903	-0.91	0.3646
edcat	2	0.0341	0.0677	0.50	0.6162
edcat	3	0.00588	0.0684	0.09	0.9318
edcat	4	0.0122	0.0719	0.17	0.8656

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates				
Effect		Point Estimate	95% Confidence Limits	
In_inc06		1.015	0.967	1.065
selfrhealth_06	2 vs 1	0.816	0.660	1.010
selfrhealth_06	3 vs 1	0.622	0.499	0.776
selfrhealth_06	4 vs 1	0.419	0.336	0.522
selfrhealth_06	5 vs 1	0.204	0.155	0.270
age_06		0.936	0.930	0.943
marcat_06	2 vs 1	0.891	0.790	1.005
marcat_06	3 vs 1	0.753	0.601	0.944
diabetes_06		0.845	0.771	0.926
arthritis_06		1.298	1.160	1.453
racecat	2 vs 1	0.816	0.677	0.983
racecat	3 vs 1	0.836	0.665	1.051
racecat	4 vs 1	0.840	0.574	1.230
edcat	2 vs 1	1.035	0.904	1.185
edcat	3 vs 1	1.006	0.877	1.154
edcat	4 vs 1	1.012	0.876	1.169

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	73.1	Somers' D	0.465
Percent Discordant	26.6	Gamma	0.467
Percent Tied	0.3	Tau-a	0.185
Pairs	27640240	c	0.733

Response propensity model (2012), 100 Pattern (06,no 08,no 10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=0 resp10=0

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	1033
Number of Observations not in Domain	10756
Sum of Weights in Domain	4032032.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	4032032
Sum of Weights Used	4032032

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	983	3823167.0
2	1	50	208865.0

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	1643342.5	1256288.9
SC	1643355.7	1256513.5
-2 Log L	1643340.5	1256254.9

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	6.35	12.2143	684.00	<.0001
Score	7.41	16	41	<.0001
Wald	3.77	16	41	0.0003

NOTE: Second-order Rao-Scott design correction 0.3099 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.27	1	56	0.6046
selfrhealth_06	5.37	4	53	0.0010
age_06	16.57	1	56	0.0001
marcat_06	1.24	2	55	0.2979
diabetes_06	0.00	1	56	0.9729
arthritis_06	0.07	1	56	0.7940
racecat	3.02	3	54	0.0374
edcat	1.14	3	54	0.3416

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	1.5677	1.9920	0.79	0.4346
In_inc06	0.0792	0.1522	0.52	0.6046
selfrhealth_06 2	0.0332	0.5701	0.06	0.9538
selfrhealth_06 3	-1.5411	0.6558	-2.35	0.0223
selfrhealth_06 4	-1.7387	0.7354	-2.36	0.0216

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-2.1004	0.8660	-2.43	0.0185
age_06		-0.0550	0.0135	-4.07	0.0001
marcat_06	2	-0.6456	0.4176	-1.55	0.1278
marcat_06	3	-0.1815	0.6327	-0.29	0.7753
diabetes_06		-0.0193	0.5657	-0.03	0.9729
arthritis_06		0.0868	0.3308	0.26	0.7940
racecat	2	-0.8103	0.7599	-1.07	0.2909
racecat	3	0.6911	0.7056	0.98	0.3316
racecat	4	0.2037	0.9461	0.22	0.8303
edcat	2	-0.1429	0.6336	-0.23	0.8223
edcat	3	-0.2196	0.7437	-0.30	0.7689
edcat	4	0.4785	0.6908	0.69	0.4914

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.082	0.798 1.468
selfrhealth_06	2 vs 1	1.034	0.330 3.239
selfrhealth_06	3 vs 1	0.214	0.058 0.797
selfrhealth_06	4 vs 1	0.176	0.040 0.767
selfrhealth_06	5 vs 1	0.122	0.022 0.694
age_06		0.946	0.921 0.972
marcat_06	2 vs 1	0.524	0.227 1.210
marcat_06	3 vs 1	0.834	0.235 2.962
diabetes_06		0.981	0.316 3.046
arthritis_06		1.091	0.562 2.116
racecat	2 vs 1	0.445	0.097 2.038
racecat	3 vs 1	1.996	0.486 8.204
racecat	4 vs 1	1.226	0.184 8.158
edcat	2 vs 1	0.867	0.244 3.084
edcat	3 vs 1	0.803	0.181 3.562
edcat	4 vs 1	1.614	0.404 6.439

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	80.3	Somers' D	0.620
Percent Discordant	18.3	Gamma	0.628
Percent Tied	1.4	Tau-a	0.057
Pairs	49150	c	0.810

Response propensity model (2012), 100 Pattern (06,no 08,no 10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=0 resp10=1

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	182
Number of Observations not in Domain	11607
Sum of Weights in Domain	910388.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	910388
Sum of Weights Used	910388

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	44	212871.00
2	1	138	697517.00

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		
	3	0	1		

Class Level Information					
Class	Value	Design Variables			
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	990242.62	843291.77
SC	990254.34	843491.03
-2 Log L	990240.62	843257.77

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	1.77	11.7554	658.30	0.0506
Score	1.03	16	41	0.4438
Wald	2.03	16	41	0.0343

NOTE: Second-order Rao-Scott design correction 0.3611 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.38	1	56	0.2447
selfrhealth_06	1.27	4	53	0.2916
age_06	0.48	1	56	0.4899
marcat_06	1.71	2	55	0.1903
diabetes_06	0.92	1	56	0.3419
arthritis_06	1.75	1	56	0.1911
racecat	2.25	3	54	0.0933
edcat	1.51	3	54	0.2234

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	1.4105	1.9785	0.71	0.4789
In_inc06	0.1632	0.1388	1.18	0.2447
selfrhealth_06 2	0.8691	0.9398	0.92	0.3591
selfrhealth_06 3	0.1614	0.9404	0.17	0.8643
selfrhealth_06 4	0.0253	0.8400	0.03	0.9761
selfrhealth_06 5	1.4361	1.1199	1.28	0.2050

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
age_06		-0.0149	0.0215	-0.70	0.4899
marcat_06	2	-0.7220	0.4689	-1.54	0.1293
marcat_06	3	0.3602	1.1034	0.33	0.7453
diabetes_06		-0.4215	0.4397	-0.96	0.3419
arthritis_06		-0.6440	0.4867	-1.32	0.1911
racecat	2	-0.8599	0.7553	-1.14	0.2597
racecat	3	-0.4252	0.8983	-0.47	0.6378
racecat	4	-2.3458	0.9736	-2.41	0.0193
edcat	2	0.6592	0.5223	1.26	0.2121
edcat	3	0.5940	0.5405	1.10	0.2765
edcat	4	-0.3719	0.6760	-0.55	0.5844

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		1.177	0.891 1.555
selfrhealth_06 2 vs 1		2.385	0.363 15.670
selfrhealth_06 3 vs 1		1.175	0.179 7.731
selfrhealth_06 4 vs 1		1.026	0.191 5.518
selfrhealth_06 5 vs 1		4.204	0.446 39.623
age_06		0.985	0.944 1.029
marcat_06	2 vs 1	0.486	0.190 1.243
marcat_06	3 vs 1	1.434	0.157 13.073
diabetes_06		0.656	0.272 1.583
arthritis_06		0.525	0.198 1.392
racecat	2 vs 1	0.423	0.093 1.921
racecat	3 vs 1	0.654	0.108 3.952
racecat	4 vs 1	0.096	0.014 0.673
edcat	2 vs 1	1.933	0.679 5.504
edcat	3 vs 1	1.811	0.613 5.348
edcat	4 vs 1	0.689	0.178 2.671

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	67.1	Somers' D	0.347
Percent Discordant	32.5	Gamma	0.348
Percent Tied	0.4	Tau-a	0.128
Pairs	6072	c	0.673

Response propensity model (2012), 100 Pattern (06,no 08,no 10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=1 resp10=0

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	1354
Number of Observations not in Domain	10435
Sum of Weights in Domain	5291546.0

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	5291546
Sum of Weights Used	5291546

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	1227	4755792.0
2	1	127	535754.0

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		

Class Level Information					
Class	Value	Design Variables			
	3	0	1		
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	3469294.6	3066705.6
SC	3469308.1	3066934.8
-2 Log L	3469292.6	3066671.6

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	6.60	11.5801	648.49	<.0001
Score	4.35	16	41	<.0001
Wald	4.96	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.3817 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	0.34	1	56	0.5613
selfrhealth_06	1.87	4	53	0.1291
age_06	22.89	1	56	<.0001
marcat_06	6.85	2	55	0.0022
diabetes_06	3.64	1	56	0.0615
arthritis_06	2.04	1	56	0.1584
racecat	2.22	3	54	0.0966
edcat	0.03	3	54	0.9926

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	3.0384	1.1037	2.75	0.0079
In_inc06	-0.0428	0.0733	-0.58	0.5613
selfrhealth_06 2	0.1799	0.5173	0.35	0.7294
selfrhealth_06 3	-0.2172	0.5130	-0.42	0.6737
selfrhealth_06 4	-0.3029	0.6171	-0.49	0.6255

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
selfrhealth_06	5	-1.2973	0.7174	-1.81	0.0759
age_06		-0.0519	0.0108	-4.78	<.0001
marcat_06	2	-0.7657	0.2714	-2.82	0.0066
marcat_06	3	-2.2658	0.7551	-3.00	0.0040
diabetes_06		-0.5591	0.2930	-1.91	0.0615
arthritis_06		0.4431	0.3099	1.43	0.1584
racecat	2	-0.7649	0.3304	-2.32	0.0243
racecat	3	-0.7076	0.3911	-1.81	0.0758
racecat	4	-1.1450	0.7126	-1.61	0.1137
edcat	2	0.0303	0.2476	0.12	0.9030
edcat	3	-0.00705	0.3073	-0.02	0.9818
edcat	4	-0.0918	0.3669	-0.25	0.8033

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		0.958	0.827 1.110
selfrhealth_06	2 vs 1	1.197	0.425 3.374
selfrhealth_06	3 vs 1	0.805	0.288 2.249
selfrhealth_06	4 vs 1	0.739	0.215 2.543
selfrhealth_06	5 vs 1	0.273	0.065 1.150
age_06		0.949	0.929 0.970
marcat_06	2 vs 1	0.465	0.270 0.801
marcat_06	3 vs 1	0.104	0.023 0.471
diabetes_06		0.572	0.318 1.028
arthritis_06		1.558	0.837 2.898
racecat	2 vs 1	0.465	0.240 0.902
racecat	3 vs 1	0.493	0.225 1.079
racecat	4 vs 1	0.318	0.076 1.326
edcat	2 vs 1	1.031	0.628 1.693
edcat	3 vs 1	0.993	0.537 1.838
edcat	4 vs 1	0.912	0.437 1.902

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	73.7	Somers' D	0.481
Percent Discordant	25.6	Gamma	0.485
Percent Tied	0.8	Tau-a	0.082
Pairs	155829	c	0.740

Response propensity model (2012), 100 Pattern (06,no 08,no 10)

The SURVEYLOGISTIC Procedure

Domain Analysis for domain resp08=1 resp10=1

Domain Summary	
Number of Observations	11789
Number of Observations in Domain	9220
Number of Observations not in Domain	2569
Sum of Weights in Domain	42322021

Model Information		
Data Set	WORK.HRS_2006_2012	
Response Variable	resp12	
Number of Response Levels	2	
Stratum Variable	stratum	STRATUM ID
Number of Strata	56	
Cluster Variable	secu	SAMPLING ERROR COMPUTATION UNIT
Number of Clusters	112	
Weight Variable	kwgtr	2006 WEIGHT: RESPONDENT LEVEL
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	11789
Number of Observations Used	11789
Sum of Weights Read	42322021
Sum of Weights Used	42322021

Response Profile			
Ordered Value	resp12	Total Frequency	Total Weight
1	0	975	4063196
2	1	8245	38258825

Probability modeled is resp12=1.

Class Level Information					
Class	Value	Design Variables			
selfrhealth_06	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
marcat_06	1	0	0		
	2	1	0		
	3	0	1		

Class Level Information					
Class	Value	Design Variables			
racecat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
edcat	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

Model Convergence Status
 Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	26766061	25386275
SC	26766076	25386539
-2 Log L	26766059	25386241

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	18.87	11.8470	663.43	<.0001
Score	9.63	16	41	<.0001
Wald	8.65	16	41	<.0001

NOTE: Second-order Rao-Scott design correction 0.3506 applied to the Likelihood Ratio test.

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
In_inc06	1.17	1	56	0.2831
selfrhealth_06	6.71	4	53	0.0002
age_06	100.13	1	56	<.0001
marcat_06	1.50	2	55	0.2330
diabetes_06	0.88	1	56	0.3520
arthritis_06	1.03	1	56	0.3142
racecat	2.39	3	54	0.0789
edcat	0.19	3	54	0.9027

Analysis of Maximum Likelihood Estimates				
Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.9422	0.6019	11.53	<.0001
In_inc06	-0.0421	0.0389	-1.08	0.2831
selfrhealth_06 2	-0.2737	0.1716	-1.59	0.1164
selfrhealth_06 3	-0.3708	0.1744	-2.13	0.0379
selfrhealth_06 4	-0.6410	0.1847	-3.47	0.0010
selfrhealth_06 5	-1.0594	0.2212	-4.79	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr > t
age_06		-0.0526	0.00526	-10.01	<.0001
marcat_06	2	-0.1396	0.0810	-1.72	0.0904
marcat_06	3	-0.0775	0.2756	-0.28	0.7797
diabetes_06		-0.0916	0.0976	-0.94	0.3520
arthritis_06		0.1036	0.1020	1.02	0.3142
racecat	2	-0.2481	0.1391	-1.78	0.0800
racecat	3	-0.3814	0.1415	-2.70	0.0093
racecat	4	0.0263	0.2234	0.12	0.9066
edcat	2	-0.0197	0.1025	-0.19	0.8486
edcat	3	-0.0856	0.1171	-0.73	0.4678
edcat	4	-0.0319	0.1259	-0.25	0.8006

NOTE: The degrees of freedom for the t tests is 56.

Odds Ratio Estimates			
Effect		Point Estimate	95% Confidence Limits
In_inc06		0.959	0.887 1.036
selfrhealth_06	2 vs 1	0.761	0.539 1.073
selfrhealth_06	3 vs 1	0.690	0.487 0.979
selfrhealth_06	4 vs 1	0.527	0.364 0.763
selfrhealth_06	5 vs 1	0.347	0.223 0.540
age_06		0.949	0.939 0.959
marcat_06	2 vs 1	0.870	0.739 1.023
marcat_06	3 vs 1	0.925	0.533 1.607
diabetes_06		0.912	0.750 1.110
arthritis_06		1.109	0.904 1.361
racecat	2 vs 1	0.780	0.590 1.031
racecat	3 vs 1	0.683	0.514 0.907
racecat	4 vs 1	1.027	0.656 1.606
edcat	2 vs 1	0.981	0.799 1.204
edcat	3 vs 1	0.918	0.726 1.161
edcat	4 vs 1	0.969	0.753 1.246

NOTE: The degrees of freedom in computing the confidence limits is 56.

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	66.8	Somers' D	0.346
Percent Discordant	32.2	Gamma	0.349
Percent Tied	0.9	Tau-a	0.065
Pairs	8038875	c	0.673

Response propensity model (2012), 100 Pattern (06,no 08,no 10)

The MEANS Procedure

Analysis Variable : phat12_100 Estimated Probability					
N	N Miss	Mean	Std Error	Lower 95% CL for Mean	Upper 95% CL for Mean
11789	0	0.0737554	0.000848665	0.0720919	0.0754190

Mean for CUMCPROB_CASE (Cumulative Probability Weight)

The MEANS Procedure

Analysis Variable : cumprob_case					
N	N Miss	Mean	Std Dev	Minimum	Maximum
11789	0	0.5484638	0.3025298	0.000639373	0.9265652

The GENMOD Procedure

IVEware Setup Checker, 02MAR25, 8:55:07

Setup listing:

```

title Example 11.3.4 Weighted GEE Analysis with JRR Approach;
datain hrs_long_1 ;
stratum stratum ; cluster secu ; weight casewt ;
* begin SAS code for JRR process ;
* note, since we are using STRATUM/SECU for JRR method for variance estimation we remove STRATUM as
predictor from model ;
proc genmod ;
class gender (ref=first) newid_num year ;
model ln_inc = yrssince06 gender yrs06sq yrssince06*gender yrs06sq*gender ;
repeated subject=newid_num / type=exch corrw ;
run ;

```

IVEware Multiple Imputation Regression, Sun Mar 02 08:56:26 2025

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Example 11.3.4 Weighted GEE Analysis with JRR Approach

```

Valid cases          40325
Sum weights         1098056982
Replicates          56

```

```

Degr freedom        56

```

Variable	Estimate	Std Error	Wald test	Prob > Chi
Intercept	10.7944216	0.0732970	21688.31711	0.00000
yrssince06	-0.0722572	0.0471730	2.34625	0.12558
gender 2	-0.6540280	0.1282121	26.02165	0.00000
gender 1	0.0000000	0.0000000	0.00000	0.00000
yrs06sq	0.0027577	0.0083220	0.10981	0.74036
yrssince06*gender 2	0.0771244	0.0800586	0.92804	0.33537
yrssince06*gender 1	0.0000000	0.0000000	0.00000	0.00000
yrs06sq*gender 2	-0.0063865	0.0121385	0.27682	0.59879
yrs06sq*gender 1	0.0000000	0.0000000	0.00000	0.00000

Variable	Estimate	95% Confidence Interval	
		Lower	Upper
Intercept	10.7944216	10.6475896	10.9412537
yrssince06	-0.0722572	-0.1667564	0.0222421
gender 2	-0.6540280	-0.9108684	-0.3971877
gender 1	0.0000000	0.0000000	0.0000000
yrs06sq	0.0027577	-0.0139133	0.0194287
yrssince06*gender 2	0.0771244	-0.0832526	0.2375015
yrssince06*gender 1	0.0000000	0.0000000	0.0000000
yrs06sq*gender 2	-0.0063865	-0.0307030	0.0179300
yrs06sq*gender 1	0.0000000	0.0000000	0.0000000