BRFSS

Behavioral Risk Factor Surveillance System

2004

Behavioral Risk Factor Surveillance System

Calculated Variables and Risk Factors

(Version 3 – Revised 03/10/2005)

CDC

CENTERS FOR DISEASE
CONTROL AND PREVENTION

Calculated Variables on the 2004 Behavioral Risk Factor Surveillance System Data File

INTRODUCTION:

This document provides information on calculated variables and risk factors for the 2003 Behavioral Risk Factor Survey. These variables are calculated from responses to questions in the survey. There are three types of calculated variables.

The first are those variables used to stratify and weight the data. These variables are not included in this document and include the following:
AGEG, _FINALWT, _IMPAGE, _IMPNPH, _MSACODE, _POSTSTR, _RACEG3_, _RAW, _REGION, _SEXG_, _STSTR, _STRWT, and _WT2.

The second are intermediate variables. These are variables are derived from a question response and are used to calculate some other variable or risk factor. For example: WTKG is derived from the WEIGHT variable in the survey. WTKG is then used to calculate the body mass index variable (_BMI2). Most of the intermediate variables end with an underscore (Example: FTJUDAY_), but not all of them do.

The third type of calculated variables are those used to categorize or classify respondents. Most of these begin with an underscore. (Example: _BMI2.) Exceptions are _DENSTR2, _GEOSTR, and _STATE, which are determined before the interview. Some of the calculated variables group continuous variables such as weight, age, or body mass index, into categories. Other calculated variables create "Risk Factors." The "Risk Factors" group respondents into two categories, "At Risk" or "Not At Risk" based on their responses. The "At Risk" group has health behaviors that are associated with an increased risk for illness or injury.

The tables in this report include a description of what the responses mean and a copy of the code used to calculate these variables in SAS®. The syntax of the code may or may not work as is in other statistical programs.

NEW CALCULATED VARIABLES FOR 2004:
There were no new calculated variables for 2004.

CALCULATED VARIABLES WITH CHANGED NAMES FOR 2004:
_**FLUSHOT** changed to _**FLSHOT2** due to FLUSHOT changing to FLUSHOT2.
_**RFPAP3Y** changed to _**RFPAP32** due to HADPAP changing to HADPAP2 and LASTPAP changing to
      LASTPAP2.
_**RFSIGMD** change to _**RFSIGM2** due to HADSIGM2 changing to HADSIGM3.
_**AIDSTST** changed to _**AIDTST2** due to HIVTST3 changing to HIVTST4.
_**STDCNDM** changed to _**STDCND2** due to PCSAIDS changing to PCSAIDS2.
HTIN3 changed from **HTIN2** due to **HEIGHT** changing to **HEIGHT2** (up to four digits).
HTM3 changed from **HTM2** due to **HTIN2** changing to **HTIN3**.
WTKG2 changed from **WTKG** due to **WEIGHT** changing to **WEIGHT2** (up to four digits).
_**BMI4** changed from _**BMI3** due to **HTM2** changing to **HTM3** and **WTKG** changing to **WTKG2**.
_**BMI4CAT** changed from _**BMI3CAT** due to _**BMI3** changing to _**BMI4**.
_**RFBMI4** changed from _**RFBMI3** due to _**BMI3** changing to _**BMI4**.

Section 1: Health Status

_RFHLTH   *Risk Factor: Fair or Poor health.* _RFHLTH is derived from GENHLTH.

1	Not At Risk	Respondents report having excellent, very good or good health (GENHLTH =1, 2, 3)
2	At Risk	Respondents who report having fair or poor health (GENHLTH =4, 5)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents who report they don't know their general health status, those who refused to answer the general health question, and those with missing responses (GENHLTH =7, 9, Missing)
SAS code:		IF 4 LE GENHLTH LE 5 THEN _RFHLTH=2; ELSE IF 1 LE GENHLTH LE 3 THEN _RFHLTH=1; ELSE _RFHLTH=3;

Section 2: Healthy Days – Health Related Quality of Life
There are no calculated variables for Section 2.

Section 3: Health Care Access
There are no calculated variables for Section 3.

Section 4: Exercise

_TOTINDA   *Risk Factor: No leisure time physical activity or exercise during the past 30 days other than the respondent's regular job.* _TOTINDA is derived from EXERANY2. (Meets Healthy People 2010 Objective #22-1: No Leisure-Time Physical Activity)

1	Not At Risk	Respondents who report any level of physical activity or exercise (EXERANY2=1)
2	At Risk	Respondents report no physical activity or exercise (EXERANY2=2)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents who report they don't know if they have participated in any physical activity or exercise during the past 30 days, those who refused to answer the physical activity/exercise question, and those with missing responses (EXERANY2=7, 9, Missing)
SAS code:		IF EXERANY2 IN (1) THEN _TOTINDA=1; ELSE IF EXERANY2 IN (2) THEN _TOTINDA=2; ELSE IF EXERANY2 IN (.,7,9) THEN _TOTINDA=9;

Section 5: Environmental Factors
There are no calculated variables for Section 5.

Section 6: Excess Sun Exposure
There are no calculated variables for Section 6.

Section 7: Tobacco Use

_SMOKER2   *Four level smoker status.* _SMOKER2 is derived from SMOKE100 and SMOKEDAY.

1	Current Smoker (every day)	Respondents that reported having smoked at least 100 cigarettes in their lifetime and now smoke every day (SMOKE100=1 and SMOKEDAY=1)
2	Current Smoker (some days)	Respondents that reported having smoked at least 100 cigarettes in their lifetime and now smoke some days (SMOKE100=1 and SMOKEDAY=2)
3	Former Smoker	Respondents that reported having smoked at least 100 cigarettes in their lifetime and currently do not smoke (SMOKE100=1 and SMOKEDAY=3)
4	Never Smoked	Respondents that reported they had not smoked at least 100 cigarettes in their lifetime (SMOKE100=2)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents who reported they didn't know if they had smoked 100 cigarettes in their lifetime, those that refused to answer if they had smoked 100 cigarettes in their lifetime, those that didn't know if they now smoked every day, some days or not at all, those that refused to answer if they now smoked every day, some days or not at all, or those with missing responses (SMOKE100=7, 9, Missing; or SMOKEDAY=7, 9, Missing)

SAS code:
```
IF SMOKE100=2 THEN _SMOKER2=4;
ELSE IF SMOKE100=1 THEN DO;
     IF SMOKEDAY=1 THEN _SMOKER2=1;
   ELSE IF SMOKEDAY=2 THEN _SMOKER2=2;
   ELSE IF SMOKEDAY=3 THEN _SMOKER2=3;
   END;
ELSE _SMOKER2=9;
```

_RFSMOK2   *Risk factor: Respondents that reported having smoked at least 100 cigarettes in their lifetime and currently smoke.* _RFSMOK2 derived from _SMOKER2.

1	Not At Risk	Respondents that reported they had not smoked at least 100 cigarettes in their lifetime, those that reported having smoked 100 cigarettes in their lifetime but do not currently smoke (_SMOKER2=3, 4)
2	At Risk	Respondents that reported having smoked at least 100 cigarettes in their lifetime and currently smoke (_SMOKER2=1, 2)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents who reported they did not know if they had smoked 100 cigarettes in their lifetime, those that refused to answer if they had smoked 100 cigarettes in their lifetime, those that didn't know if they now smoked every day, some days or not at all, those that refused to answer if they now smoked every day, some days or not at all, or those with missing responses (SMOKER2=9)

SAS code:
```
   IF _SMOKER2 IN (1,2) THEN _RFSMOK2=2;
ELSE IF _SMOKER2 IN (3,4) THEN _RFSMOK2=1;
ELSE _RFSMOK2=9;
```

Section 8: Alcohol Consumption (continued)

_RFBING2		*Risk factor: Having five or more drinks of alcohol on an occasion.* _RFBING2 is derived from DRNK2GE5 and ALCDAY3.
1	Not At Risk	Respondents who report they did not drink in the past 30 days, or those that report that they did drink alcohol in the past 30 days but did not report having five or more drinks of alcohol on an occasion (ALCDAY3<231 and DRNK2GE5=88; or ALCDAY3=888)
2	At Risk	Respondents who report they did drink in the past 30 days and had five or more drinks on one or more occasions in the past month (ALCDAY3<231 and 1<=DRNK2GE5<=76)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents who reported that they did not know if they had consumed five or more drinks of alcohol on one occasion or refused to answer if they had consumed five or more drinks of alcohol on one occasion or those with missing responses (DRNK2GE5=77, 99, Missing; or ALCDAY3=777, 999, Missing)
SAS code:		IF ALCDAY3 NOTIN (777,888,999,.) THEN DO;

```
        IF (1 LE DRNK2GE5 LE 76) THEN _RFBING2=2;
        ELSE IF DRNK2GE5 IN (.,77,99) THEN _RFBING2=9;
        ELSE IF DRNK2GE5 IN (88) THEN _RFBING2=1;
        END;
ELSE IF ALCDAY3 IN (888) THEN _RFBING2=1;
ELSE _RFBING2=9;
```

_DRNKDY2		*Total number of alcohol drinks consumed per day.* _DRNKDY2 is derived from DROCCDY_ and AVEDRNK by multiplying the total number of drink occasions per day (DROCCDY_) by the average number of drinks per occasion (AVEDRNK). DRNKDY2 is stored in the data set with two implied decimal places. To get the actual value, divide DRNKDY2 by 100.
0		Respondents who did not drink in the past month (DROCCDY_=0)
99	Don't Know/ Not Sure/ Refused/ Missing	Respondents who refused to report the number of alcohol drinks consumed per day, or respondents who did not know the number of alcohol drinks consumed per day, or those with missing responses (AVEDRNK=Missing,77,99) or respondents who refused to report the number drink occasions per day, or respondents who did not know the number of drink occasions per day, or those with missing responses (DROCCDY_=9)
SAS code:		IF DROCCDY_=0 THEN _DRNKDY2=0;

```
ELSE IF DROCCDY_=9 THEN _DRNKDY2=99;
ELSE IF AVEDRNK IN (.,77,99) THEN _DRNKDY2=99;
ELSE _DRNKDY2=AVEDRNK * DROCCDY_;
_DRNKDY2=ROUND((_DRNKDY2*100),1); *This is done after all of the
alcohol calculations but the code is included here;
```

Section 8: Alcohol Consumption (continued)

_DRNKMO2		*Total number of alcohol drinks per month.* _DRNKMO2 is derived by multiplying _DRNKDY2 by 30.
0		Respondents who did not consume any drinks of alcohol in the past month
9999	Don't Know/ Not Sure/ Refused/ Missing	Respondents who reported they did not know if they consumed any drinks of alcohol in the past month, or those that refused to answer if they consumed any drinks of alcohol in the past month
.	Missing	Respondents with missing responses
SAS code:		IF _DRNKDY2 NOTIN (.,99) THEN _DRNKMO2=_DRNKDY2*30; ELSE IF _DRNKDY2=99 THEN _DRNKMO2=9999; ELSE _DRNKMO2=.; _DRNKMO2=ROUND(_DRNKMO2,1); *This is done after all of the alcohol calculations but the code is included here;

_RFDRHV2		*Risk factor: Heavy alcohol consumption.* _RFDRHV2 is derived from _DRNKDY2, ALCDAY3, and SEX. Heavy alcohol consumption was defined as men having an average of more than 2 drinks per day and women having an average of more than 1 drink per day. (_DRNKDY2 has two implied decimal places; therefore, two drinks per day are represented as _DRNKDY2=200.)
1	Not At Risk	Male respondents who report having 2 drinks per day or less, or female respondents who report having 1 drinks per day or less (Sex=1 and _DRNKDY2 <= 200 or Sex=2 and _DRNKDY2 <= 100 or ALCDAY3=888)
2	At Risk	Male respondents who report having more than 2 drinks per day, or female respondents who report having more than 1 drink per day (Sex=1 and _DRNKDY2 > 200 or Sex=2 and _DRNKDY2 > 100)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents for whom ALCDAY3=777, 999, or Missing, or _DRNKDY2=99, or Missing

SAS code:		IF SEX=1 AND _DRNKDY2 NOTIN (99,.) THEN DO;
		    IF _DRNKDY2 GT 2 THEN _RFDRHV2=2;
		    ELSE IF _DRNKDY2 LE 2 THEN _RFDRHV2=1;
		    END;
		ELSE IF SEX=2 AND _DRNKDY2 NOTIN (99,.) THEN DO;
		    IF _DRNKDY2 GT 1 THEN _RFDRHV2=2;
		    ELSE IF _DRNKDY2 LE 1 THEN _RFDRHV2=1;
		    END;
		ELSE IF ALCDAY3 IN (888) THEN _RFDRHV2=1;
		ELSE _RFDRHV2=9;

Section 8: Alcohol Consumption (continued)

_RFDRMN2		*Risk factor: Heavy alcohol consumption among men.* _RFDRMN2 is derived from _DRNKDY2 and SEX and ALCDAY3. Heavy alcohol consumption was defined as men having an average of more than 2 drinks per day. (_DRNKDY2 has two implied decimal places; therefore, two drinks per day are represented as _DRNKDY2=200.)
1	Not At Risk	Male respondents who report having 2 drinks per day or less (SEX=1 and _DRNKDY2 <= 200 or ALCDAY3=888)
2	At Risk	Male respondents who report having more than 2 drinks per day (SEX=1 and _DRNKDY2 > 200)
9	Don't Know/ Not Sure/ Refused/ Missing	Male respondents (SEX=1) for whom ALCDAY3=777, 999, or Missing, or _DRNKDY2=99, or Missing
.	Female	Female respondents (SEX=2).

SAS code:
```
IF SEX=1 THEN DO;
    IF _DRNKDY2 NOTIN (99,.) THEN DO;
        IF _DRNKDY2 GT 2 THEN _RFDRMN2=2;
        ELSE IF _DRNKDY2 LE 2 THEN _RFDRMN2=1;
        END;
    ELSE IF ALCDAY3 IN (888) THEN _RFDRMN2=1;
    ELSE IF ALCDAY3 IN (.,777,999) THEN _RFDRMN2=9;
    END;
ELSE IF SEX=2 THEN _RFDRMN2=.;
```

_RFDRWM2		*Risk factor: Heavy alcohol consumption among women.* _RFDRMN2 is derived from _DRNKDY2 and SEX and ALCDAY3. Heavy alcohol consumption was defined as women having an average of more than 1 drink per day. (_DRNKDY2 has two implied decimal places; therefore, two drinks per day are represented as _DRNKDY2=200.)
1	Not At Risk	Female respondents who report having 1 drink per day or less (SEX=2 and _DRNKDY2 <= 200 or ALCDAY3=888)
2	At Risk	Female respondents who report having more than 1 drink per day (SEX=2 and _DRNKDY2 > 200)
9	Don't Know/ Not Sure/ Refused/ Missing	Female respondents (SEX=2) for whom ALCDAY3=777, 999, or Missing, or _DRNKDY2=99, or Missing
.	Male	Male respondents (SEX=1)

SAS code:
```
IF SEX=2 THEN DO;
    IF _DRNKDY2 NOTIN (99,.) THEN DO;
        IF _DRNKDY2 GT 1 THEN _RFDRWM2=2;
        ELSE IF _DRNKDY2 LE 1 THEN _RFDRWM2=1;
        END;
    ELSE IF ALCDAY3 IN (888) THEN _RFDRWM2=1;
    ELSE IF ALCDAY3 IN (.,777,999) THEN _RFDRWM2=9;
    ELSE _RFDRWM2=9;
    END;
ELSE IF SEX=1 THEN _RFDRWM2=.;
```

Section 9: Asthma

_LTASTHM   *Risk factor: Respondents who have been told by a doctor, nurse or health professional that they had asthma.* _LTASTHM is derived from ASTHMA2.

1	Not At Risk	Respondents that have not been told by a doctor, nurse or health professional that they had asthma (ASTHMA2=2)
2	At Risk	Respondents that have been told by a doctor, nurse or health professional that they had asthma (ASTHMA2=1)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents who reported they did not know if they had been told by a doctor, nurse or health professional that they had asthma, those that refused to answer if they had been told by a doctor, nurse or health professional that they had asthma, or those with missing responses (ASTHMA2=7, 9, Missing)

SAS code:
```
    IF ASTHMA2=1 THEN _LTASTHM=2;
ELSE IF ASTHMA2=2 THEN _LTASTHM=1;
ELSE _LTASTHM=9;
```

_CASTHMA   *Risk factor: Respondents who have been told by a doctor, nurse or health professional that they had asthma and that they still have asthma.* _CASTHMA is derived from ASTHMA2 and ASTHNOW.

1	Not At Risk	Respondents that have not been told by a doctor, nurse or health professional that they had asthma (ASTHMA2=2) or do not still have asthma (ASTHMA2=1 and ASTHNOW=2)
2	At Risk	Respondents that have been told by a doctor, nurse or health professional that they had asthma (ASTHMA2=1) and that they still have asthma (ASTHNOW=1)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents who reported they did not know if they had been told by a doctor, nurse or health professional that they had asthma, those that refused to answer if they had been told by a doctor, nurse or health professional that they had asthma, those that did not know if they still had asthma, those that refused to answer if they still had asthma, or those with missing responses (ASTHMA2=7, 9, Missing) or (ASTHNOW=7, 9, Missing)

SAS code:
```
    IF ASTHMA2=2 THEN _CASTHMA=1;
ELSE IF ASTHMA2=1 AND ASTHNOW=1 THEN _CASTHMA=2;
ELSE IF ASTHMA2=1 AND ASTHNOW=2 THEN _CASTHMA=1;
ELSE _CASTHMA=9;
```

Section 9: Asthma (continued)

_ ASTHMST		*Computed asthma status: Those currently, formerly or never having been told that they had asthma.* _ ASTHMST is derived from ASTHMA2 and ASTHNOW.
1	Current	Have been told by a doctor, nurse or health professional that they had asthma (ASTHMA2=1) and that they still have asthma (ASTHNOW=1)
2	Former	Have been told by a doctor, nurse or health professional that they had asthma (ASTHMA2=1) but do not still have asthma (ASTHNOW=2)
3	Never	Have not been told by a doctor, nurse or health professional that they had asthma (ASTHMA2=2)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents who reported they didn't know if they had been told by a doctor, nurse or health professional that they had asthma, those that refused to answer if they had been told by a doctor, nurse or health professional that they had asthma, those that didn't know if they still had asthma, those that refused to answer if they still had asthma, or those with missing responses (ASTHMA2=7, 9, Missing; or ASTHNOW=7, 9, Missing)
	SAS code:	IF ASTHMA2=1 AND ASTHNOW=1 THEN _ASTHMST=1; ELSE IF ASTHMA2=1 AND ASTHNOW=2 THEN _ASTHMST=2; ELSE IF ASTHMA2=2 THEN _ASTHMST=3; ELSE _ASTHMST=9;

Section 10: Diabetes
There are no calculated variables for Section 10.

Section 11: Oral Health

_EXTEETH		*Risk factor for having had permanent teeth extracted.* Variable is derived from RMVTEETH. (Meets Healthy People 2010 Objective 21-3: Increase the proportion of adults who have never had a permanent tooth extracted because of dental caries or periodontal disease.)
1	Not At Risk	Have had no permanent teeth removed (RMVTEETH=8).
2	At Risk	Have had permanent teeth removed (RMVTEETH=1 or 2 or 3).
9	Don't Know/ Not Sure/ Refused/ Missing	Respondent either with missing values, or refused to answer or did not know if they had any permanent teeth extracted (RMVTEETH=7, 9, Missing).
	SAS code:	IF RMVTEETH IN (1,2,3) THEN _EXTEETH=2; ELSE IF RMVTEETH=8 THEN _EXTEETH=1; ELSE _EXTEETH=9;

Section 11: Oral Health (continued)

_ALTEETH		*Risk factor for having had all permanent teeth extracted.* Variable is created from RMVTEETH. (Meets Healthy People 2010 Objective 21-4: Reduce the proportion of older adults who have had all their natural teeth extracted (adults aged 65+).)
1	Not At Risk	Respondents aged 65 or more who reported having none or some natural teeth removed (RMVTEETH=1, 2, 8)
2	At Risk	Respondents aged 65 or more who reported having all natural teeth removed (RMVTEETH=3)
9	Don't Know/ Not Sure/ Refused	Respondents who refused or didn't know their age or refused or didn't know if they had any natural teeth removed (AGE=7, 9, Missing; or RMVTEETH=7, 9, Missing)
.	Missing	Respondents aged 18-64

SAS code:
```
IF AGE >= 65 THEN DO;
        IF RMVTEETH IN (1,2,8) THEN _ALTEETH=1;
        ELSE IF RMVTEETH=3 THEN _ALTEETH=2;
        ELSE IF RMVTEETH IN (.,7,9) THEN _ALTEETH=9;
END;
ELSE IF AGE IN (.,7,9) THEN _ALTEETH=9;
ELSE _ALTEETH=.;
```

_DENTVST		*Risk factor for having visited a dentist, dental hygienist or dental clinic within the past year.* (Meets Healthy People 2010 Objective 21-10: Increase the proportion of adults who use the oral health care system each year.)
1	Not At Risk	Respondents that reported having had dental visit or teeth cleaning visit in the past year (LASTDEN2=1 or DENCLEAN=1)
2	At Risk	Respondents that reported having not had dental visit or teeth cleaning visit in the past year (LASTDEN2=2, 3, or 4 and DENCLEAN=2, 3, 4, 7, 8, 9, or Missing)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents with missing values or who refused or didn't know if they had a dental visit or teeth cleaning visit in the past year (LASTDEN2=Missing,7,9 and DENCLEAN=7, 9, or Missing)

SAS code:
```
   IF LASTDEN2=8 THEN _DENTVST=2;
ELSE IF LASTDEN2 IN (2,3,4) AND DENCLEAN IN (.,2,3,4,7,8,9) THEN
        _DENTVST=2;
ELSE IF LASTDEN2=1 OR DENCLEAN=1 THEN _DENTVST=1;
ELSE IF LASTDEN2 IN (.,7,9) AND DENCLEAN IN (2,3,4,8)     THEN
        _DENTVST=2;
ELSE _DENTVST=9;
```

Section 12: Immunization

_FLSHOT2		*Risk factor: Respondents aged 65 and older who have had flu shot within the past 12 months.* _FLSHOT2 is derived from FLUSHOT2. (Meets Healthy People 2010 Objective # 14-29: Increase The Proportion Of Adults Who Are Vaccinated Annually Against Influenza – Non-institutionalized Adults Aged 65+.) (Note: the name was changed from _FLUSHOT in 2002 due to FLUSHOT changing to FLUSHOT2.)
(Name changed in 2004)		
1	Not At Risk	Respondents aged 65 or older who reported having a flu shot within the past 12 months (FLUSHOT2=1)
2	At Risk	Respondents aged 65 or older who reported not having had a flu shot within the past 12 months (FLUSHOT2=2)
9	Don't Know/ Not Sure/ Refused	Respondents who did not know their age, those that refused to report their age, those that didn't know if they had a flu shot in the past 12 months, or those that refused to answer if they had a flu shot in the past 12 months, or those with missing responses (AGE=7, 9, Missing; or FLUSHOT2=7, 9, Missing)
.	Missing	Respondents aged 18-64

SAS code:
```
IF AGE GE 65 THEN DO;
     IF FLUSHOT2=1 THEN _FLSHOT2=1;
   ELSE IF FLUSHOT2=2 THEN _FLSHOT2=2;
   ELSE IF FLUSHOT2 IN (.,7,9) THEN _FLSHOT2=9;
   END;
ELSE IF AGE IN (.,7,9) THEN _FLSHOT2=9;
ELSE _FLSHOT2=.;
```

_PNEUMOC		*Risk factor: Respondents aged 65 and older who have ever had a pneumonia shot.* _PNEUMOC is derived from PNEUVAC2. (Meets Healthy People 2010 objective #14-29: Increase the proportion of adults who were ever vaccinated against pneumococcal disease – non-institutionalized adults aged 65+.)
1	Not At Risk	Respondents aged 65 or older who reported having a pneumonia shot (PNEUVAC2=1)
2	At Risk	Respondents aged 65 or older who reported not having had a pneumonia shot (PNEUVAC2=2)
9	Don't Know/ Not Sure/ Refused	Respondents who did not know their age, those that refused to report their age, those that did not know if they ever had a pneumonia shot, those that refused to answer if they had a pneumonia shot, or those with missing responses (AGE=7, 9, Missing; or PNEUVAC2=7, 9, Missing)
.	Missing	Respondents aged 18-64

SAS code:
```
IF AGE GE 65 THEN DO;
     IF PNEUVAC2=1 THEN _PNEUMOC=1;
   ELSE IF PNEUVAC2=2 THEN _PNEUMOC=2;
   ELSE IF PNEUVAC2 IN (.,7,9) THEN _PNEUMOC=9;
   END;
ELSE IF AGE IN (.,7,9) THEN _PNEUMOC=9;
ELSE _PNEUMOC=.;
```

Section 13: Demographics Race variables

MRACEORG   *Reported MRACE variable with any trailing 7,8, or 9 removed.* MRACEORG is derived from MRACE in the original order in which the data were received from the state/territory. If MRACE is greater than 9 then any trailing 7,8, or 9 is removed. If MRACE is less than or equal to 9 then MRACEORG is equal to MRACE. (Example: If MRACE=3147 then MRACEORG=314.)

SAS code:
```
IF LENGTH(MRACE) > 1 THEN DO;
  MRACEORG = PUT(COMPRESS(MRACE,'789'),6.);
END;
ELSE DO;
  MRACEORG=MRACE;
END;
```

MRACEASC   *Reported MRACE variable with any trailing 7,8, or 9 removed, in ascending order.* MRACEASC is derived from MRACEORG. The values that make up MRACEORG are sorted from smallest to largest. (Example: If MRACEORG=513 then MRACEASC=135.)

SAS code:
```
IF LENGTH(TRIM(LEFT(MRACEORG))) > 1 THEN DO;
LEN=LENGTH(RIGHT(MRACEORG));
DO I = 1 TO LEN-1;
DO J = 1 TO LEN-1 WHILE (SUBSTR(MRACEORG,J+1,1)
NE ' ');
IF SUBSTR(MRACEORG,J,1) > SUBSTR(MRACEORG,J+1,1) THEN
SUBSTR(MRACEORG,J,2) = REVERSE(SUBSTR(MRACEORG,J,2));
END;
END;
END;
MRACEASC = INPUT(MRACEORG,6.);
```

Section 13: Demographics Race variables (continued)

_PRACE		*Preferred race category.* _PRACE is derived from MRACEASC and ORACE2. If MRACEASC has only one response, then _PRACE= MRACEASC. If MRACEASC has more than one response then _PRACE=ORACE2. Hispanic or Latino information is not used to derive this variable.
1	White	Respondents who report their race as white (MRACE=1 or MRACEASC>11 and ORACE2=1)
2	Black	Respondents who report their race as black (MRACE=2 or MRACEASC>11 and ORACE2=2)
3	Asian	Respondents who report they are Asian (MRACE=3 or MRACEASC>11 and ORACE2=3)
4	Native Hawaiian or Pacific Islander	Respondents who report their race as Native Hawaiian or Pacific Islander (MRACE=4 or MRACEASC>11 and ORACE2=4)
5	American Indian, Alaska Native	Respondents who report their race as American Indian or Alaska Native (MRACE=5 or MRACEASC>11 and ORACE2=5)
6	Other Race	Respondents who report they are of some other race group not listed in the question responses (MRACE=6 or MRACEASC>11 and ORACE2=6)
7	No Preferred Race	Respondents who report they are of more than one race group but do not report a preference or preferred race is missing (MRACEASC>11 and ORACE2=7 or 9)
8	Multiracial (Preferred Race Not Asked)	Respondents who report they are of more than one race group but did not answer the question about which race best represents them **NOTE: This is a data collection error.** (MRACEASC >11 and ORACE2=8) or (MRACEASC >11 and ORACE2=Missing)
77	Don't Know	Respondents who report they did not know their race and did not answer the question about which race best represents them. (MRACEASC =7)
99	Refused	Respondents who refused to give their race and did not answer the question about which race best represents them (MRACEASC =9)
SAS code:		IF 1 LE MRACEASC LE 6 THEN _PRACE=MRACEASC; ELSE IF MRACEASC EQ 7 THEN _PRACE=77; ELSE IF MRACEASC EQ 9 THEN _PRACE=99; ELSE IF MRACEASC GE 12 AND ORACE2 IN (7,9) THEN _PRACE=7; ELSE IF MRACEASC GE 12 AND ORACE2 EQ . THEN _PRACE=8; ELSE IF MRACEASC GE 12 AND ORACE2 EQ 8 THEN _PRACE=8; ELSE IF 1 LE ORACE2 LE 6 THEN _PRACE=ORACE2;

Section 13: Demographics Race variables (continued)

_MRACE		*Multiracial race categorization.* _MRACE is derived from MRACEASC. If respondents report more than one race they are assigned to the multiracial category. Otherwise _MRACE=MRACEASC. Hispanic or Latino information not used in defining this variable.
01	White only	Respondents who report they are white (MRACEASC=1)
02	Black only	Respondents who report they are black (MRACEASC=2)
03	Asian only	Respondents who report they are Asian (MRACEASC=3)
04	Native Hawaiian or Pacific Islander only	Respondents who report they are Native Hawaiian or Pacific Islander (MRACEASC=4)
05	American Indian, Alaska Native only	Respondents who report they are American Indian or Alaska Native (MRACEASC=5)
06	Other Race only	Respondents who report they are of some other race group not listed in the question responses (MRACEASC=6)
07	Multiracial	Respondents who report they are of more than one race group but do not specify a preferred race (MRACEASC>11)
77	Don't Know/ Not Sure	Respondents who report they did not know their race (MRACEASC=7)
99	Refused	Respondents who refused to give their race information (MRACEASC=9)

SAS code:
```
IF MRACEASC GE 12 THEN _MRACE = 7;
ELSE IF MRACEASC EQ 9 THEN _MRACE = 99;
ELSE IF MRACEASC EQ 7 THEN _MRACE = 77;
ELSE IF 1 LE MRACEASC LE 6 THEN _MRACE = MRACEASC;
```

Section 13: Demographics Race variables (continued)

RACE2		*Race/ethnicity categories.* RACE2 is derived from _MRACE and HISPANC2. All respondents who report they are of Hispanic or Latino origin are coded as Hispanic.
1	White only, Non-Hispanic	Respondents who report they are white and not of Hispanic origin (_MRACE=01 and HISPANC2=2)
2	Black only, Non-Hispanic	Respondents who report they are black and not of Hispanic origin (_MRACE=02 and HISPANC2=2)
3	Asian only, Non-Hispanic	Respondents who report they are Asian and not of Hispanic origin (_MRACE=03 and HISPANC2=2)
4	Native Hawaiian or Pacific Islander only, Non-Hispanic	Respondents who report they are Native Hawaiian or Islander and not of Hispanic origin (_MRACE=04 and HISPANC2=2)
5	American Indian, Alaska Native only, Non-Hispanic	Respondents who report they are American Indian or Alaska Native and not of Hispanic origin (_MRACE=05 and HISPANC2=2)
6	Other Race only, Non-Hispanic	Respondents who report they are of some other race group not listed in the question responses and are not of Hispanic origin (_MRACE=06 and HISPANC2=2)
7	Multiracial, Non-Hispanic	Respondents who report they are of more than one race group and are not of Hispanic origin (_MRACE=07 and HISPANC2=2)
8	Hispanic	Respondents who report they are of Hispanic origin (HISPANC2=1)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents who did not know their race or refused to give their race and are not of Hispanic origin or did not know if they are of Hispanic origin or refused to answer if they are of Hispanic origin (_MRACE =77,99 and HISPANC2=2, or HISPANC2=7,9)

SAS code:

```
IF HISPANC2 IN (7,9) OR (_MRACE IN(77,99) AND HISPANC2 EQ 2)
THEN DO;
        RACE2=9;
        END;
 ELSE IF HISPANC2=2 THEN DO;
        IF _MRACE=1 THEN RACE2=1;
        ELSE IF _MRACE=2 THEN RACE2=2;
        ELSE IF _MRACE=3 THEN RACE2=3;
        ELSE IF _MRACE=4 THEN RACE2=4;
        ELSE IF _MRACE=5 THEN RACE2=5;
         ELSE IF _MRACE=6 THEN RACE2=6;
        ELSE IF _MRACE=7 THEN RACE2=7;
        END;
 ELSE IF HISPANC2=1 THEN DO;
        RACE2=8;
        END;
```

Section 13: Demographics Race variables (continued)

_RACEG2   *White/Hispanic race group.* _RACEG2 is derived from RACE2.

1	White only, Non-Hispanic	Respondents who report they are white and not of Hispanic origin (RACE2=1)
2	Non-White, Multiracial or Hispanic	All other respondents with valid RACE2 responses (RACE2=2, 3, 4, 5, 6, 7, 8)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents for whom RACE2=9
	SAS code:	IF RACE2=1 THEN _RACEG2=1; ELSE IF RACE2 IN (2,3,4,5,6,7,8) THEN _RACEG2=2; ELSE IF RACE2=9 THEN _RACEG2=9;

_RACEGR2   *Five-level race/ethnicity category*. _RACEGR2 is derived from RACE2.

1	White only, Non-Hispanic	Respondents who report they are white and not of Hispanic origin (RACE2=1)
2	Black only, Non-Hispanic	Respondents who report they are black and not of Hispanic origin (RACE2=2)
3	Other Race only, Non-Hispanic	All other respondents with valid race responses except for those reporting multiracial or Hispanic origins (RACE2=3,4,5,6)
4	Multiracial, Non-Hispanic	All other respondents reporting multiracial but non-Hispanic origin (RACE2=7)
5	Hispanic	Respondents who report that they are of Hispanic origin (RACE2=8)
9	Don't Know/ Not Sure/ Refused	Respondents for whom RACE2=9
	SAS code:	IF RACE2=1 THEN _RACEGR2=1; ELSE IF RACE2=2 THEN _RACEGR2=2; ELSE IF 3 LE RACE2 LE 6 THEN _RACEGR2=3; ELSE IF RACE2 EQ 7 THEN _RACEGR2=4; ELSE IF RACE2 EQ 8 THEN _RACEGR2=5; ELSE IF RACE2=9 THEN _RACEGR2=9;

Section 13: Demographics Race variables (continued)

_RACE_G *(New Variable in 2004)*

Five-level race/ethnicity category. _RACE_G is derived from _RACEGR2. _RACE_G is used to create the data for the web tables.

1	White only, Non-Hispanic	Respondents who report they are white and not of Hispanic origin (_RACEGR2=1)
2	Black only, Non-Hispanic	Respondents who report they are black and not of Hispanic origin (_RACEGR2=2)
3	Hispanic	Respondents who report that they are of Hispanic origin (_RACEGR2=5)
4	Other Race only, Non-Hispanic	All other respondents with valid race responses except for those reporting multiracial or Hispanic origins (_RACEGR2=3)
5	Multiracial, Non-Hispanic	All other respondents reporting multiracial but non-Hispanic origin (_RACEGR2=4)
.	Don't Know/ Not Sure/ Refused/ Missing	Respondents for whom _RACEGR2=9 or _RACEGR2=Missing

SAS code:
```
       IF _RACEGR2 = 1 THEN _RACE_G = 1;
ELSE IF _RACEGR2 = 2 THEN _RACE_G = 2;
ELSE IF _RACEGR2 = 3 THEN _RACE_G = 4;
ELSE IF _RACEGR2 = 4 THEN _RACE_G = 5;
ELSE IF _RACEGR2 = 5 THEN _RACE_G = 3;
```

_CNRACE

Number of census race categories chosen. _CNRACE is derived from MRACEASC and is equal to the number of "census" race categories chosen: (White, Black, Asian, Native Hawaiian/Pacific Islander, American Indian/Alaska Native).

1-5	MRACEASC is between 1 and 5
0	MRACEASC is between 6 and 9

SAS code:
```
* EXTRA CHARACTERS (6,7,9) ARE REMOVED;
MRACE_=COMPRESS(MRACEASC,'679');
* BLANK SPACES ARE REMOVED;
IF MRACEASC NOTIN (6,7,9) THEN DO;
        _CNRACE=LENGTH(COMPRESS(MRACE_));
        END;
ELSE DO;
        _CNRACE=0;
        END;
```

Section 13: Demographics Race variables (continued)

_CNRACEC   *Number of census race categories chosen, collapsed.* _CNRACEC is derived from
                  _CNRACE.

1	One category	One census race category chosen by the respondent (_CNRACE=1)
2	More than one category	Two or more census race categories chosen by the respondent (_CNRACE > 1)
.	Don't Know/ Not Sure/ Refused/ Missing	Respondents for whom _CNRACE=0

SAS code:

```
IF _CNRACE EQ 0 THEN _CNRACEC=.;
ELSE IF _CNRACE EQ 1 THEN _CNRACEC=1;
ELSE _CNRACEC=2;
```

Section 13: Demographics Age variables

_AGEG5YR   *Fourteen-level age category.* _AGEG5YR is derived from AGE.

01	18–24	Respondents with reported age including 18–24 years
02	25–29	Respondents with reported age including 25–29 years
03	30–34	Respondents with reported age including 30–34 years
04	35–39	Respondents with reported age including 35–39 years
05	40–44	Respondents with reported age including 40–44 years
06	45–49	Respondents with reported age including 45–49 years
07	50–54	Respondents with reported age including 50–54 years
08	55–59	Respondents with reported age including 55–59 years
09	60–64	Respondents with reported age including 60–64 years
10	65–69	Respondents with reported age including 65–69 years
11	70–74	Respondents with reported age including 70–74 years
12	75–79	Respondents with reported age including 75–79 years
13	80–99	Respondents with reported age including 80–99 years
14	Don't Know/ Not Sure/ Refused/ Missing	Respondents that reported they did not know their age, or those that refused to report their age, or those with missing responses (AGE=7,9,Missing)

SAS code:

```
IF 18 LE AGE LE 24 THEN _AGEG5YR=1;
ELSE IF 25 LE AGE LE 29 THEN _AGEG5YR=2;
ELSE IF 30 LE AGE LE 34 THEN _AGEG5YR=3;
ELSE IF 35 LE AGE LE 39 THEN _AGEG5YR=4;
ELSE IF 40 LE AGE LE 44 THEN _AGEG5YR=5;
ELSE IF 45 LE AGE LE 49 THEN _AGEG5YR=6;
ELSE IF 50 LE AGE LE 54 THEN _AGEG5YR=7;
ELSE IF 55 LE AGE LE 59 THEN _AGEG5YR=8;
ELSE IF 60 LE AGE LE 64 THEN _AGEG5YR=9;
ELSE IF 65 LE AGE LE 69 THEN _AGEG5YR=10;
ELSE IF 70 LE AGE LE 74 THEN _AGEG5YR=11;
ELSE IF 75 LE AGE LE 79 THEN _AGEG5YR=12;
ELSE IF 80 LE AGE LE 99 THEN _AGEG5YR=13;
ELSE _AGEG5YR=14;
```

Section 13: Demographics Age variables (continued)

_AGE65YR — *Two-level age category.* _AGE65YR is derived from AGE.

1	18–64	Respondents with reported ages 18–64 (AGE <=64)
2	65–99	Respondents with reported ages 64–99 (AGE > 64)
3	Don't Know/ Not Sure/ Refused/ Missing	Respondents for whom AGE=7, 9, or Missing

SAS code:
```
IF 18 LE AGE LE 64 THEN _AGE65YR=1;
ELSE IF 65 LE AGE LE 99 THEN _AGE65YR=2;
ELSE _AGE65YR=3;
```

_AGE_G
(New Variable in 2004) — *Six-level age category.* _AGE_G is derived from _IMPAGE (imputed age). _AGE_G is used to create the data for the web tables.

1	18–24	Respondents with imputed ages 18–24 (18 <= _IMPAGE <= 24)
2	25–34	Respondents with imputed ages 25–34 (25 <= _IMPAGE <= 34)
3	35–44	Respondents with imputed ages 35–44 (35 <= _IMPAGE <= 44)
4	45–54	Respondents with imputed ages 45–54 (45 <= _IMPAGE <= 54)
5	55–64	Respondents with imputed ages 55–64 (55 <= _IMPAGE <= 64)
6	65+	Respondents with imputed ages 65–99 (_IMPAGE => 65)

SAS code:
```
 IF (18<=_IMPAGE<=24) THEN _AGE_G = 1;
ELSE IF (25<=_IMPAGE<=34) THEN _AGE_G = 2;
ELSE IF (35<=_IMPAGE<=44) THEN _AGE_G = 3;
ELSE IF (45<=_IMPAGE<=54) THEN _AGE_G = 4;
ELSE IF (55<=_IMPAGE<=64) THEN _AGE_G = 5;
ELSE IF (_IMPAGE >= 65)   THEN _AGE_G = 6;
```

Section 13: Demographics Overweight & Obese

HTIN3
(Name changed in 2004) — *Reported height in inches.* HTIN3 is derived from HEIGHT2. HTIN3 is calculated by adding the foot portion of HEIGHT2 multiplied by 12, to the inch portion. (Note: HTIN3 gets rounded after all of the BMI calculations occur to make sure that there are no decimals.) *(Name changed from HTIN2 to HTIN3 due to the variable HEIGHT2 changing to HEIGHT3.)*

SAS code:
```
* CREATE HEIGHT1 CHARACTER VARIABLE;
HEIGHT2=PUT(HEIGHT1,3.);
IF HEIGHT2 NOT IN (777,999) THEN DO;
HTIN3=INPUT((SUBSTR(HEIGHT2,2,2)),2.)) +
        ((INPUT((SUBSTR(HEIGHT2,1,1)),1.))*12);
        END;
HTIN3 = round(HTIN3,1);   *
IF HTIN3=. THEN HTIN3=999; *This is done after all of the BMI
calculations but the code is included here;
```

Section 13: Demographics Overweight & Obese (continued)

HTM3

(Name changed in 2004)

Reported height in meters. HTM3 is derived from the variable HTIN3 by multiplying HTIN3 by 2.54 cm/in and dividing by 100 cm/meter. (Note: HTM3 is stored in the data set with two implied decimal places and gets rounded after all of the BMI calculations are completed; therefore all calculations include the decimals.) *(Name changed from HTM2 to HTM3 due to the variable HTIN2 changing to HTIN3.)*

SAS code:
```
HTM3 = (HTIN3 * 2.54) / 100;
HTM3 = round((HTM3*100),1);
IF HTM3=. THEN HTM3=999;    *This is done after all of the BMI
calculations but the code is included here;
```

WTKG2

(Name changed in 2004)

Reported weight in kilograms. WTKG2 is derived from WEIGHT2 by dividing WEIGHT2 by 2.2 kg/lb. (Note: WTKG2 is stored in the data set with two implied decimal places and gets rounded after all of the BMI calculations are completed; therefore all calculations include the decimals.) *(Name changed from WTKG to WTKG2 due to the variable WEIGHT changing to WEIGHT2.)*

SAS code:
```
IF WEIGHT2 NOT IN (777,999) THEN DO;
       WTKG2=WEIGHT2 / 2.2;
       END;
WTKG2 = round((WTKG2*100),1);
IF WTKG2=. THEN WTKG2=99999;  *This is done after all of the BMI
calculations but the code is included here;
```

_BMI4

(Name changed in 2004)

Body mass index (BMI). _BMI4 is derived from WTKG2 and HTM3. It is calculated by WTKG2 divided by HTM3². (Note: The final _BMI4 value is rounded so it is free of decimals.) *(Name changed from _BMI3 to _BMI4 due to the variable WTKG changing to WTKG2 and HTM2 changing to HTM3.)*

SAS code:
```
IF (WTKG2 NOTIN (.)) AND (HTM3 NOTIN (.))  THEN _BMI4= WTKG2 /
(HTM3 ** 2);
ELSE _BMI4=.;
IF _BMI4 GT 99.98 THEN _BMI4 = 99.98;
ELSE IF _BMI4=. THEN _BMI4 = 99.99;
_BMI4 = ROUND((_BMI4*100),1); *This is done after all of the BMI
calculations but the code is included here;
```

Section 13: Demographics Overweight & Obese (continued)

_BMI4CAT *(Name changed in 2004)*	*Body mass index (BMI) categories.* Variable is derived from _BMI4. *(Name changed from _BMI3CAT to _BMI4CAT due to _BMI3 changing to _BMI4.)*	
1	Not Overweight or Obese	Respondents for whom _BMI4 < 25.00
2	Overweight	Respondents for whom 25.00 <= _BMI4 < 30.00
3	Obese	Respondents for whom 30.00 <= _BMI4 < 99.99
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents for whom _BMI4=99.99

SAS code:
```
IF ( 0.00 LE _BMI4 < 25.00) THEN _BMI4CAT = 1;
ELSE IF (25.00 LE _BMI4 < 30.00) THEN _BMI4CAT = 2;
ELSE IF (30.00 LE _BMI4 < 99.99) THEN _BMI4CAT = 3;
ELSE IF (_BMI4 = 99.99) THEN _BMI4CAT = 9;
```

_RFBMI4 *(Name changed in 2004)*	*Risk factor: Respondents classified as overweight or obese.* Variable is derived from _BMI4. *(Name changed from _ RFBMI3 to _ RFBMI4 due to _BMI3 changing to _BMI4.)*	
1	Not At Risk	Respondents for whom _BMI4 < 25.00
2	At Risk	Respondents for whom 25.00 <= _BMI4 < 99.99
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents for whom _BMI4=99.99

SAS code:
```
IF ( 0.00 LE _BMI4 < 25.00) THEN _RFBMI4 = 1;
ELSE IF (25.00 LE _BMI4 < 99.99) THEN _RFBMI4 = 2;
ELSE IF (_BMI4 = 99.99) THEN _RFBMI4 = 9;
```

Section 13: Demographics (continued)

_CHLDCNT   *Number of children.* _CHLDCNT is derived from CHILDREN.

1	No Children	Respondents for whom CHILDREN = 88
2	One Children	Respondents for whom CHILDREN = 1
3	Two Children	Respondents for whom CHILDREN = 2
4	Three Children	Respondents for whom CHILDREN = 3
5	Four Children	Respondents for whom CHILDREN = 4
6	Five or more Children	Respondents for whom 5 <= _ CHILDREN < 87
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents for whom CHILDREN = 99

SAS code:

```
IF CHILDREN = 88 THEN _CHLDCNT = 1;
ELSE IF CHILDREN = 01 THEN _CHLDCNT = 2;
ELSE IF CHILDREN = 02 THEN _CHLDCNT = 3;
ELSE IF CHILDREN = 03 THEN _CHLDCNT = 4;
ELSE IF CHILDREN = 04 THEN _CHLDCNT = 5;
ELSE IF 05 <= CHILDREN < 88 THEN _CHLDCNT = 6;
ELSE IF CHILDREN = 99 THEN _CHLDCNT = 9;
```

_EDUCAG   *Highest grade of education completed.* _EDUCAG is derived from EDUCA.

1	Did not graduate High School	Respondents for whom EDUCA = 1,2,3
2	High School graduate	Respondents for whom EDUCA = 4
3	Attended College or Technical School	Respondents for whom EDUCA = 5
4	College or Technical School graduate	Respondents for whom EDUCA = 6
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents for whom EDUCA = 9 or Missing

SAS code:

```
IF EDUCA IN (1,2,3) THEN _EDUCAG = 1;
ELSE IF EDUCA IN (4) THEN _EDUCAG = 2;
ELSE IF EDUCA IN (5) THEN _EDUCAG = 3;
ELSE IF EDUCA IN (6) THEN _EDUCAG = 4;
ELSE IF EDUCA IN (.,9) THEN _EDUCAG = 9;
```

Section 13: Demographics (continued)

_INCOMG   *Annual Household Income.* _INCOMG is derived from INCOME2.

1	Less than $15,000	Respondents for whom INCOME2 = 1 or 2
2	$15,000 to less than $25,000	Respondents for whom INCOME2 = 3 or 4
3	$25,000 to less than $35,000	Respondents for whom INCOME2 = 5
4	$35,000 to less than $50,000	Respondents for whom INCOME2 = 6
5	$50,000 or more	Respondents for whom INCOME2 = 7 or 8
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents for whom INCOME2 = 77 or 99 or Missing

SAS code:

```
IF INCOME2 IN (1,2) THEN _INCOMG = 1;
ELSE IF INCOME2 IN (3,4) THEN _INCOMG = 2;
ELSE IF INCOME2 IN (5) THEN _INCOMG = 3;
ELSE IF INCOME2 IN (6) THEN _INCOMG = 4;
ELSE IF INCOME2 IN (7,8) THEN _INCOMG = 5;
ELSE IF INCOME2 IN (77,99,.) THEN _INCOMG = 9;
```

Section 14: Veterans Status
There are no calculated variables for Section 14.

Section 15: Women's Health

_RFMAM2Y *Women aged 40 and older who have not had a mammogram within the past two years*. Variable derived from SEX, AGE, HADMAM, and HOWLONG.

1	Not At Risk	Female respondents aged 40 and older that have received a mammogram within the past two years (HADMAM=1 and HOWLONG=1,2)
2	At Risk	Female respondents aged 40 and older that have not received a mammogram within the past two years (HADMAM=2 or HADMAM=1 and HOWLONG=3,4,5)
9	Don't Know/ Not Sure/ Refused	Female respondents aged 40 and older with don't know, not sure, or refused responses for HADMAM or HOWLONG or female respondents with don't know, not sure, refused or missing responses for AGE (HADMAM=7,9 or HOWLONG=7,9 or AGE=7,9,Missing)
.	Missing	Female respondents aged 40 and older with missing responses for HADMAM or HOWLONG, female respondents less than 40 years old, or male respondents

SAS code:

```
IF SEX=2 AND AGE GE 40 THEN DO;
 IF HADMAM=1 THEN DO;
     IF HOWLONG IN (1,2) THEN _RFMAM2Y=1;
  ELSE IF HOWLONG IN (3,4,5) THEN _RFMAM2Y=2;
  ELSE IF HOWLONG IN (7,9) THEN _RFMAM2Y=9;
  END;
 ELSE IF HADMAM=2 THEN _RFMAM2Y=2;
 ELSE IF HADMAM IN (7,9) THEN _RFMAM2Y=9;
 ELSE IF HADMAM=. THEN _RFMAM2Y=.;
 END;
ELSE IF SEX=2 AND AGE IN (.,7,9) THEN _RFMAM2Y=9;
ELSE  _RFMAM2Y=.;
```

Section 15: Women's Health (continued)

_RFPAP32 *(Name changed in 2004)*		*Female respondents aged 18 and older, with intact cervix, who have not had a pap smear within the past three years.* _RFPAP32 is derived from the variables SEX, AGE, HADHYST2, PREGNANT, HADPAP2, and LASTPAP2. (Note: the name was changed from _RFPAP3Y in 2002 due to HADPAP changing to HADPAP2 and LASTPAP changing to LASTPAP2.)
1	Not At Risk	Female respondents aged 18 and older, with intact cervix, that have received a pap smear within the past three years (SEX=2 and AGE GE 18 and HADHYST2≠1 or PREGNANT=1 and HADPAP2=1 and LASTPAP2=1,2,3)
2	At Risk	Female respondents aged 18 and older, with intact cervix, that have not received a pap smear within the past three years (SEX=2 and AGE GE 18 and HADHYST2≠1 or PREGNANT=1 and HADPAP2=2 or HADPAP2=1 and LASTPAP2=4,5)
9	Don't Know/ Not Sure/ Refused	Female respondents aged 18 and older, with intact cervix, with don't know, not sure or refused responses for HADPAP2 or LASTPAP2 or females with don't know, not sure, refused or missing responses to AGE (SEX=2 and AGE GE 18 and HADHYST2≠1 or PREGNANT=1 and HADPAP2=7,9 or LASTPAP2=7,9 or AGE=7,9,Missing)
.	Missing	Female respondents aged 18 and older with missing responses for HADPAP2 or LASTPAP2, or with yes, responses for having had a hysterectomy (HADHYST2=1), or male respondents.

SAS code:
```
IF SEX=2 AND HADHYST2=1 AND PREGNANT NE 1 THEN DO;
_RFPAP32=.;
END;
ELSE DO;
IF SEX=2 AND AGE >= 18 THEN DO;
IF HADPAP2=1 THEN DO;
IF 1 LE LASTPAP2 LE 3 THEN _RFPAP32=1;
ELSE IF 4 LE LASTPAP2 LT 7 THEN _RFPAP32=2;
ELSE IF LASTPAP2 IN (7,9) THEN _RFPAP32=9;
ELSE IF LASTPAP2=. THEN _RFPAP32=.;
END;
ELSE IF HADPAP2=2 THEN _RFPAP32=2;
ELSE IF HADPAP2 IN (7,9) THEN _RFPAP32=9;
ELSE IF HADPAP2=. THEN _RFPAP32=.;
END;
ELSE IF SEX=2 AND AGE IN (.,7,9) THEN _RFPAP32=9;
ELSE _RFPAP32=.;
END;
```

Section 16: Prostate Cancer Screening

_RFPSA2Y   *Men aged 40 and older who have not had a PSA test within the past two years.*
                Variable is derived from SEX, AGE, PSATEST, and PSATIME.

1	Not At Risk	Male respondents aged 40 and older that have had a PSA test within the past two years (PSATEST=1 and PSATIME=1 or 2)
2	At Risk	Male respondents aged 40 and older that have not received a PSA test within the past two years (PSATEST=2 or PSATEST=1 and PSATIME=3 or 4 or 5)
9	Don't Know/ Not Sure/ Refused	Male respondents aged 40 and older with don't know, not sure or refused responses for PSATEST or PSATIME or male respondents with don't know, not sure, refused or missing responses to AGE (PSATEST=7,9 or PSATIME=7,9 or AGE=7,9,Missing)
.	Missing	Male respondents aged 40 and older with missing responses for PSATEST or PSATIME, Male respondents aged less than 40, or female respondents

SAS code:

```
IF (SEX=1) AND (AGE GE 40) THEN DO;
IF PSATEST=1 THEN DO;
IF PSATIME IN (1,2) THEN _RFPSA2Y=1;
ELSE IF PSATIME IN (3,4,5) THEN _RFPSA2Y=2;
ELSE IF PSATIME IN (7,9) THEN _RFPSA2Y=9;
ELSE IF PSATIME=. THEN _RFPSA2Y=.;
END;
ELSE IF PSATEST=2 THEN _RFPSA2Y=2;
ELSE IF PSATEST IN (7,9) THEN _RFPSA2Y=9;
ELSE IF PSATEST=. THEN _RFPSA2Y=.;
END;
ELSE IF (SEX=1) AND AGE IN (.,7,9) THEN _RFPSA2Y=9;
ELSE _RFPSA2Y=.;
```

Section 17: Colorectal Cancer Screening

_RFBLDST *Respondents aged 50 and older who have not had a blood stool test within the past two years*. Variable is derived from AGE, BLDSTOOL, and LSTBLDS2. (Meets Healthy People 2010 objective 3-12A: Increase the proportion of adults who receive a colorectal cancer screening examination.)

1	Not At Risk	Respondents aged 50 and older who have had a blood stool test within the past two years (BLDSTOOL=1 and LSTBLDS2=1 or 2)
2	At Risk	Respondents aged 50 and older who have not received a blood stool test within the past two years (BLDSTOOL=2 or BLDSTOOL=1 and LSTBLDS2=3 or 4)
9	Don't Know/ Not Sure/ Refused	Respondents aged 50 and older with don't know, not sure or refused responses to BLDSTOOL or LSTBLDS2 (BLDSTOOL=7,9 or LSTBLDS2=7,9) or with don't know, not sure, refused or missing responses for AGE (AGE=7,9,Missing)
.	Missing	Respondents aged 50 and older with missing responses for BLDSTOOL or LSTBLDS2, or respondents aged less than 50

SAS code:
```
IF AGE>=50 THEN DO;
IF BLDSTOOL=1 THEN DO;
IF LSTBLDS2 IN (1,2) THEN _RFBLDST=1;
ELSE IF LSTBLDS2 IN (3,4) THEN _RFBLDST=2;
ELSE IF LSTBLDS2 IN (7,9) THEN _RFBLDST=9;
ELSE IF LSTBLDS2=. THEN _RFBLDST=.;
END;
ELSE IF BLDSTOOL=2 THEN _RFBLDST=2;
ELSE IF BLDSTOOL IN (7,9) THEN _RFBLDST=9;
ELSE IF BLDSTOOL=. THEN _RFBLDST=.;
END;
ELSE IF AGE IN (.,7,9) THEN _RFBLDST=9;
ELSE _RFBLDST=.;
```

Section 17: Colorectal Cancer Screening (continued)

_RFSIGM2 *(Name changed in 2004)*		*Respondents aged 50 and older who have never had a sigmoidoscopy or colonoscopy.* Variable is derived from AGE and HADSIGM3. (Meets Healthy People 2010 objective 3-12B: Increase the proportion of adults who receive a colorectal cancer screening examination.) (Note: the name was changed from _RFSIGMD in 2002 due to HADSIGM2 changing to HADSIGM3.)
1	Not At Risk	Respondents aged 50 and older who have had a sigmoidoscopy or colonoscopy (HADSIGM3=1)
2	At Risk	Respondents aged 50 and older who have never had a sigmoidoscopy or colonoscopy (HADSIGM3=2)
9	Don't Know/ Not Sure/ Refused	Respondents aged 50 and older with don't know, not sure or refused responses to HADSIGM (HADSIGM3=7,9) or with don't know, not sure, refused or missing responses to AGE (AGE=7,9,Missing)
.	Missing	Respondents aged 50 years and older with missing responses for HADSIGM3, or respondents aged less than 50

```
        SAS code:      IF AGE>=50 THEN DO;
                       IF HADSIGM3=1 THEN _RFSIGM2=1;
                       ELSE IF HADSIGM3=2 THEN _RFSIGM2=2;
                       ELSE IF HADSIGM3 IN (7,9) THEN _RFSIGM2=9;
                       ELSE IF HADSIGM3=. THEN _RFSIGM2=.;
                       END;
                       ELSE IF AGE IN (.,7,9) THEN _RFSIGM2=9;
                       ELSE _RFSIGM2=.;
```

Section 18: Family Planning
There are no calculated variables for Section 18.

Section 19: Disability
There are no calculated variables for Section 19.

Section 20: HIV/AIDS

_AIDTST2		*Risk factor: Respondents less than 65 years old who have ever been tested for HIV.*
(Name changed		_AIDTST2 is derived from AGE and HIVTST4. (Note: the name was changed from
in 2004)		_AIDSTST in 2003 due to HIVTST3 changing to HIVTST4.)
1	Not At Risk	Respondents with reported ages between 18 and 64 who reported to have been tested for HIV (18<=AGE<=64 and HIVTST4=1)
2	At Risk	Respondents with reported ages between 18 and 64 who did not report having been tested for HIV (18<=AGE<=64 and HIVTST4=2)
9	Don't Know/ Not Sure/ Refused	Respondents with reported ages between 18 and 64 who reported they did not know if they had been tested for HIV, or those with reported ages between 18 and 64 who refused to answer if they had been tested for HIV (18<=AGE<=64 and HIVTST4=7,9), or respondents that reported they did not know their age (AGE=07), or respondents that refused to report their age (AGE=9)
.	Missing	Respondents with missing responses for HIVTST4 (HIVTST4=Missing), or respondents with reported ages older than 64 (AGE > 64), or respondents with missing age responses (AGE=Missing)

SAS code:

```
IF 18 <= AGE <= 64 THEN DO;
IF HIVTST4=1 THEN _AIDTST2=1;
ELSE IF HIVTST4=2 THEN _AIDTST2=2;
ELSE IF HIVTST4 IN (7,9) THEN _AIDTST2=9;
ELSE IF HIVTST4=. THEN _AIDTST2=.;
END;
ELSE IF AGE IN (.,7,9) THEN _AIDTST2=9;
ELSE _AIDTST2=.;
```

Section 20: HIV/AIDS (continued)

_HIGHRSK		*Risk factor: Respondents less than 65 years old who have ever participated in high-risk behavior. _HIGHRSK is derived from AGE and HIVRISK2.*
1	Not At Risk	Respondents with reported ages between18 and 64 who reported not having participated in high-risk behavior (18<=AGE<=64 and HIVRISK2=2)
2	At Risk	Respondents with reported ages between18 and 64 who reported having participated in high-risk behavior (18<=AGE<=64 and HIVRISK2=1)
9	Don't Know/ Not Sure/ Refused	Respondents with reported ages between18 and 64 who reported they did not if they had participated in high-risk behavior (18<=AGE<=64 and HIVRISK2=1), or respondents with reported ages between18 and 64 who refused to answer if they participated in high-risk behavior (18<=AGE<=64 and HIVRISK2=7,9), or respondents who reported they did not know their age (AGE=07), or respondents who refused to report their age (AGE=09), or respondents missing a response for age (AGE=Missing)
.	Missing	Respondents with reported ages between18 and 64 that were missing a response for HIVRISK2 (18<=AGE<=64 and HIVRISK2=Missing), or respondents with reported ages older than 64 (AGE > 64)

```
SAS code:     IF 18 <= AGE <= 64 THEN DO;
              IF HIVRISK2=2 THEN _HIGHRSK=1;
              ELSE IF HIVRISK2=1 THEN _HIGHRSK=2;
              ELSE IF HIVRISK2 IN (7,9) THEN _HIGHRSK=9;
              ELSE IF HIVRISK2=. THEN _HIGHRSK=.;
              END;
              ELSE IF AGE IN (.,7,9) THEN _HIGHRSK=9;
              ELSE _HIGHRSK=.;
```

Section 20: HIV/AIDS (continued)

_STDCND2 *(Name changed in 2004)*		*Risk factor: Respondents less than 65 years old who have been counseled by a doctor, nurse, or other health professional within the past 12 months on prevention of sexually transmitted diseases through condom use.* _STDCND2 is derived from AGE and PCSAIDS2. (Note: the name was changed from _ STDCNDM in 2003 due to PCSAIDS changing to PCSAIDS2.)
1	Not At Risk	Respondents with reported ages between18 and 64 who reported to have been counseled by a health professional within the past 12 months on prevention of sexually transmitted diseases through condom use (18<=AGE<=64 and PCSAIDS2=1)
2	At Risk	Respondents with reported ages between18 and 64 who did not report having been counseled by a health professional within the past 12 months on prevention of sexually transmitted diseases through condom use (18<=AGE<=64 and PCSAIDS2=2)
9	Don't Know/ Not Sure/ Refused	Respondents with reported ages between18 and 64 who did not know if they had been counseled by a health professional within the past 12 months on prevention of sexually transmitted diseases through condom use (18<=AGE<=64 and PCSAIDS2=7), or respondents with reported ages between18 and 64 who refused to answer if they had been counseled by a health professional within the past 12 months on prevention of sexually transmitted diseases through condom use (18<=AGE<=64 and PCSAIDS2=9), or respondents who reported they did not know their age (AGE=07), or respondents who refused to report their age (AGE=09), or respondents missing a response for age (AGE=Missing)
.	Missing	Respondents with reported ages between18 and 64 missing a response for PCSAIDS2 (18<=AGE<=64 and PCSAIDS2 =Missing) or respondents with reported ages older than 64 (AGE > 64)
SAS code:		IF 18 <= AGE <= 64 THEN DO; IF PCSAIDS2=1 THEN _STDCND2=1; ELSE IF PCSAIDS2=2 THEN _STDCND2=2; ELSE IF PCSAIDS2 IN (7,9) THEN _STDCND2=9; ELSE IF PCSAIDS2=. THEN _STDCND2=.; END; ELSE IF AGE IN (.,7,9) THEN _STDCND2=9; ELSE _STDCND2=.;

Section 21: Firearms

_RFFRARM   *Risk factor for living in home with loaded firearm.* Variable is derived from FIREARM4 and GUNLOAD. (Meets Healthy People 2010 objective 15-4: Reduce the proportion of persons living in homes with firearms that are loaded and unlocked.)

1	Not At Risk	Living in home with no guns or unloaded firearm (FIREARM4=1 and GUNLOAD=2 or FIREARM4=2)
2	At Risk	Living in home with loaded firearm (FIREARM4=1 and GUNLOAD=1)
9	Don't Know/ Not Sure/ Refused	Respondents who did not know, were not sure, or refused to answer if they had a firearm in the house (FIREARM4=7,9) or did not know, were not sure, or refused to answer if any of them were loaded (GUNLOAD=7,9)
.	Missing	Respondents with missing values for FIREARM4 (FIREARM4=Missing) or answered yes to having a firearm and with missing values for GUNLOAD (FIREARM4=1 and GUNLOAD=Missing)

SAS code:
```
IF FIREARM4=1 THEN DO;
IF GUNLOAD=2 THEN _RFFRARM=1;
ELSE IF GUNLOAD=1 THEN _RFFRARM=2;
ELSE IF GUNLOAD IN (7,9) THEN _RFFRARM=9;
ELSE IF GUNLOAD=. THEN _RFFRARM=.;
END;
ELSE IF FIREARM4=2 THEN _RFFRARM=1;
ELSE IF FIREARM4 IN (7,9) THEN _RFFRARM=9;
ELSE _RFFRARM=.;
```

Section 21: Firearms (continued)

_RFFRAR2   *Risk factor for living in home with loaded & unlocked firearm.* Variable is derived from FIREARM4, GUNLOAD and LOADULK2. (Meets Healthy People 2010 objective 15-4: Reduce the proportion of persons living in homes with firearms that are loaded and unlocked.)

1	Not At Risk	Living in home with no guns or unloaded firearm or locked firearm (FIREARM4=1 and GUNLOAD=2 or FIREARM4=1 and GUNLOAD=1 and LOADULK2=2 or FIREARM4=2)
2	At Risk	Living in home with loaded and unlocked firearm (FIREARM4=1 and GUNLOAD=1 and LOADULK2=1)
9	Don't Know/ Not Sure/ Refused	Respondents who did not know, were not sure, or refused to answer if they had a firearm in the house (FIREARM4=7,9) or had a loaded firearm in the house (GUNLOAD=7,9) or if any of them were unlocked (LOADULK2=7,9)
.	Missing	Respondents with missing values for FIREARM4 (FIREARM4=Missing) or answered yes to having a firearm and with missing values for GUNLOAD (FIREARM4=1 and GUNLOAD=Missing) or answered yes to having a firearm and yes that one was loaded and missing whether it was unlocked (FIREARM4=1 and GUNLOAD=1 and LOADULK2=Missing)

SAS code:

```
IF FIREARM4=1 THEN DO;
   IF GUNLOAD=2 THEN _RFFRAR2=1;
   ELSE IF GUNLOAD=1 AND LOADULK2=1 THEN _RFFRAR2=2;
   ELSE IF GUNLOAD=1 AND LOADULK2=2 THEN _RFFRAR2=1;
   ELSE IF GUNLOAD IN (7,9) THEN _RFFRAR2=9;
   ELSE IF GUNLOAD=1 AND LOADULK2 IN (7,9) THEN _RFFRAR2=9;
   ELSE _RFFRAR2=.;
END;
ELSE IF FIREARM4=2 THEN _RFFRAR2=1;
ELSE IF FIREARM4 IN (7,9) THEN _RFFRAR2=9;
ELSE _RFFRAR2=.;
```