Atherosclerosis Risk in Communities Study

EXAM 2

Derived Variable Dictionary
Version 2.10
June 2010

Table of Contents
Variables are in DERIVE2_10 unless otherwise noted.

1   Alcohol Use

1.1   DRNKR21 (V2 Drinker Status)

This is a numeric variable with values ranging from 1 to 4. These values are explained below.

DRNKR21		V2 Drinking Status	
N	Value	Description
8054	1	Current drinker
3033	2	Former drinker
3227	3	Never drinker
3	4	Unknown
31		Missing

Note: This variable includes a historical component, but no use of Visit 1 data has been made.

Table of assignment of values to DRNKR21

HHXB59: HAVE YOU EVER CONSUMED ALCOHOLIC BEVERAGES?	HHXB58: DO YOU PRESENTLY DRINK ALCOHOLIC BEVERAGES?		
	Y	N	MISSING
Y	1	2	4 (d)
N	Missing (a)	3	3 (b)
Missing	1	4 (c)	Missing

(a)   Bad data (contradictory answers)
(b)   Even though Q58 is not answered, Q59 clearly defines the
         person as a never drinker
(c)   Could be either former or never drinker
(d)   Could be either former or current drinker

1.2 ETHANL24 (V2 usual Ethanol Intake in g/wk)

This is a numeric variable that replaced ETHANL23.

ETHANL24		*V2 Usual Ethanol Intake In g/week*
N	*Value*	*Description*
14307	Range	0 - 2106.9 (median=0 mean=36.9 std=93.3)
41		Missing

Note: This variable includes a historical component, but no use of Visit 1 data has been made.
Algorithm:

$$ETHANL24 = [(HHXB64) \times 10.8]$$
$$+ [(HHXB65) \times 13.2]$$
$$+ [(HHXB66) \times 15.1]$$

   ii.   Former or never drinker
[(DRNKR21 = 2) or (DRNKR21 =3)]

ETHANL24 = 0

   iii.   Any of the following could not be determined:

   a.   Drinking status
   b.   Amount of wine
   c.   Amount of beer
   d.   Amount of hard liquor

ETHANL24 = missing

HHXB64:   Number of glasses of wine per week
{4 oz. glasses; round down}

HHXB65:   Number of bottles/cans of beer per week
{12 oz. bottles/cans; round down}

HHXB66:   Number of drinks of hard liquor per week
{1.5 oz. shots; round down]

1.3 CURDRK21 (Current Drinker)

CURDRK21		*Current Drinker Flag*
N	*Value*	*Description*
31	T	
6263	0	No
8054	1	Yes

CURDRK21 is a categorical variable that takes values according to the definition table below:

CURDRK21	HHXB58	HHXB59
1	Y	Y or Missing
0	N	any
	Missing	N
	Y	N
T	Missing	Not N

HHXB58:   Do you presently drink alcoholic beverages?   Yes, No
HHXB59:   Have you ever consumed alcoholic beverages?   Yes, No

1.4 FORDRK21 (Former Drinker)

FORDRK21	*Former Drinker Flag*	
N	*Value*	*Description*
34	T	
11281	0	No
3033	1	Yes

FORDRK21 is a categorical variable that takes values according to the definition table below:

FORDRK21	HHXB58	HHXB59
1	N	Y
0	Y	Y or Missing
	N or Missing	N
	N	Missing
	Y	N
.T	Missing	Y or .

HHXB58:   Do you presently drink alcoholic beverages?   Yes, No
HHXB59:   Have you ever consumed alcoholic beverages?   Yes, No

1.5   EVRDRK21 (Ever Drinker)

EVRDRK21		Ever Drinker Flag
N	Value	Description
34	T	
3227	0	No
11087	1	Yes

EVRDRK21 is a categorical variable that takes values according to the definition table below:

EVRDRK21	HHXB58	HHXB59
1	Y	Missing
	any	Y
0	not Y	N
.T	Y	N
	not Y	Missing

HHXB58:   Do you presently drink alcoholic beverages?   Yes, No
HHXB59:   Have you ever consumed alcoholic beverages? Yes, No

2   Anthropometry

2.1   BMI21 (V2 Body Mass Index in Kg/m²)

This is a numeric variable.

BMI21		V2 Body Mass Index In kg/m2
N	Value	Description
14320	Range	13.664591806 - 67.262452004 (median=27.149386352 mean=27.9736228761 std=5.4111605381)
28		Missing

Algorithm:

Body Mass Index =
[Weight (lbs) / 2.20] / [Height (cm) / 100]^2

$$BMI21 = (ANTB01 / 2.20) / (ANTA01 / 100)^2$$
= missing, if either or both measure is missing

ANTB01 is weight to nearest pound.
ANTA01 is the standing height in Visit 1.

2.2   MNTRCP21 (V2 Mean Triceps in mm)

MNTRCP21		V2 Mean Triceps In mm
N	Value	Description
14335	Range	3 - 65 (median=22 mean=22.6 std=9.3)
13		Missing

Mean of both Triceps measurements (mm)

MNTRCP21 = Mean (ANTB02A, ANTB02B)
= missing, if both measures are missing

2.3   MNSSCP21 (V2 Mean Subscapular in mm)

MNSSCP21		V2 Mean Subscapular In mm
N	Value	Description
14328	Range	0 - 68 (median=20.5 mean=21.99 std=10.11)
20		Missing

Mean of both Subscapular measurements (mm)

MNSSCP21 = Mean (ANTB03A, ANTB03B)
= missing, if both measures are missing

2.4 WSTHPR21 (V2 Waist-to-Hip Ratio)

WSTHPR21		V2 Waist-Hip Ratio
N	Value	Description
14328	Range	0.5390070922 - 1.5666666667 (median=0.9381443299 mean=0.92618169308 std=0.08126425754)
20		Missing

This is a numeric variable.

$$WSTHPR21 = ANTB04A / ANTB04B$$

ANTB04A: Girth of Waist in cm
ANTB04B: Girth of Hip in cm

3   Disease Prevalence

3.1   DIABTS22 (Diabetes - Lower Cutpoint 140 mg/dL))

| | | V2 Diabetes |
DIABTS22		
N	Value	Description
12598	0	No
1675	1	Yes
75		Missing

DIABTS22 is a categorical Visit 2 variable which assumes the following values according to the table below.

Value	Description
1	Diabetes = Yes
0	Diabetes = No
.T	Diabetes = Missing

Table of assignment of values to DIABTS22

DIABTS22	CHMB07	FAST0822	HHXB05D	MSRB02	MSRB24F
1	≥200	any	any	any	any
	≥140	1	any	any	any
	Any	any	Y	any	any
	Any	any	any	not T	Y
0	not missing and <140	any	N or U	any	not Y
.T	Any	0	not Y	any	not Y
	not ≥140	any	missing	any	not Y
	not ≥140	any	not Y	not T	missing

CHMB07:   Blood Glucose Level in mg/dL
FAST0822:   8 hours or more of fasting time
HHXB05D: Diabetes (Sugar in Blood)? Y, N, U (Unsure).
MSRB02[*]: Took no medications in past 2 weeks? T (no meds) F
MSRB24F: Were any of the medications you took for Diabetes or high blood sugar?
            Y, N, U (Unknown)

[*]A value of T on this item skips the patient over MSRB24F.

3.2 DIABTS23 (Diabetes - Lower Cutpoint 126 mg/dL)

DIABTS23		Diabetes - Lower Cutpoint 126 mg/dL
N	Value	Description
52	T	
12104	0	No
2159	1	Yes
33		Missing

DIABTS23 is a categorical Visit 2 variable which assumes the following values according to the table below.

Value	Description
1	Diabetes = Yes
0	Diabetes = No
.T	Diabetes = Missing

Table of assignment of values to DIABTS23

DIABTS23	CHMB07	FAST0822	HHXB05D	MSRB02	MSRB24F
1	≥200	any	any	any	any
	≥126	1	any	any	any
	Any	any	Y	any	any
	Any	any	any	not T	Y
0	not missing and <126	any	N or U	any	not Y
.T	Any	0	not Y	any	not Y
	not ≥126	any	missing	any	not Y
	not ≥ 126	any	not Y	not T	missing

CHMB07:   Blood Glucose Level in mg/dL
FAST0822:   8 hours or more of fasting time
HXB05D: Diabetes (Sugar in Blood)? Y, N, U (Unsure).
MSRB02[*]: Took no medications in past 2 weeks? T (no meds) F
MSRB24F: Were any of the medications you took for Diabetes or high blood sugar?
            Y, N, U (Unknown)

[*]A value of T on this item skips the patient over MSRB24F

3.3 QWAVE24A (Diagnostic Q-wave present from Adjudicated Data)

QWAVE24A		Diagnostic Q-wave present from Adjudicated Data
N	Value	Description
43	T	Missing value
14058	0	No
169	1	Yes
78		Missing

In this definition, diagnostic Q-wave corresponds to Minnesota codes in 1-1-x to 1-2-x, but without ST-T changes (Minnesota codes 4 or 5). This numeric Visit 2 variable does not correspond with definitions provided in the ARIC ECG manual. The variable assumes the following values according to the table below.

Value	Description
1	Diagnostic Q-wave present = Yes
0	Diagnostic Q-wave present = No
.T or .	Missing value

Table of assignment of values to QWAVE24A

QWAVE24A	ECGMBFLG	ECGMB09[*]	ECGMB10[*]	ECGMB11[*]
1	1	11-25 OR 27	Any	any
		any	11-25 OR 27	any
		any	Any	11-25 or 27
0	1	nonmiss & not 11-25 & not 27	nonmiss & not 11-25 & not 27	nonmiss & not 11-25 & not 27
.T	0	any	Any	any
missing	Any other combination of values			

[*] The values for these variables in this table correspond to the last two digits of the Minnesota codes: that is, the initial 1 contained in the Minnesota codes has been dropped.

Variable	Description	Range of Possible Values
ECGMBFLG	Whether ECG Form present or not	
ECGMB09	Q-Q.S. Pattern I, aVL, V6	1-1-x, 1-2-x, 1-3-x
ECGMB10	Q-Q.S. Pattern II, III, aVF	1-1-x, 1-2-x, 1-3-x
ECGMB11	Q-Q.S. Pattern V1-V5	1-1-x, 1-2-x, 1-3-x

3.4 QWAVE27A (Major Q-Wave present with no 7-1-1, 7-1-2, or 7-4, from Adjudicated ECG)

QWAVE27A		*Major Q-wave present with no 7-1-1, 7-1-2, or 7-4, from Original Machine Coded ECG Records*
N	*Value*	*Description*
43	M	Missing value
10	T	Missing value
14149	0	No
67	1	Yes
79		Missing

In this definition, major Q-waves correspond to Minnesota codes 1-1-x. This numeric Visit 2 variable is based on definition A in the ARIC ECG Manual and assumes the following values according to the table below.

Value	**Description**
1	Diagnostic Q-wave present = Yes
0	Diagnostic Q-wave present = No
.T or .M or .	Missing value

Table of assignment of values to QWAVE27A

QWAVE27A	ECGMBFLG	ECGMB09[*]	ECGMB10[*]	ECGMB11[*]	ECGMB24[**]
1	1	11-17	any	Any	nonmiss & not 4 and not 1 or 11
		any	11-17	Any	
		any	any	11-17	
0	1	nonmiss & not 11-17	nonmiss & not 11-17	nonmiss & not 11-17	any
.T	1	11-17	any	any	4 or 1 or 11 or missing
		any	11-17	any	
		any	any	11-17	
.M	0	any	any	any	any
Missing	Any other combination of values				

[*] The values for these variables in this table correspond to the last two digits of the Minnesota codes: that is, the initial 1 contained in the Minnesota codes has been dropped.
[**] A value of 1 for this variable corresponds to Minnesota codes 7-1-1 or 7-1-2. A value of 4 corresponds to Minnesota code 7-4.

Variable Possible Values	Description	Range of
ECGMBFLG	Whether composite ECG Record with Adjudicated Values is present or not	
ECGMB09 3-x	Q-Q.S. Pattern I, aVL, V6	1-1-x, 1-2-x, 1-
ECGMB10 3-x	Q-Q.S. Pattern II, III, aVF	1-1-x, 1-2-x, 1-
ECGMB11 3-x	Q-Q.S. Pattern V1-V5	1-1-x, 1-2-x, 1-
ECGMB24	Ventricular Conduction Defect	7-1-1 through 7-8

3.5 QWAVEM27 (Major Q-wave present with no 7-1-1, 7-1-2, or 7-4, from Original Machine Coded ECG Records)

QWAVEM27		Same As QWAVE27a But Uses Machine Code
N	Value	Description
43	M	Missing value
23	T	Missing value
14080	0	No
98	1	Yes
104		Missing

In this definition, major Q-waves correspond to Minnesota codes 1-1-x. This numeric Visit 2 variable is based on definition A in the ARIC ECG Manual and assumes the following values according to the table below.

Value	Description
1	Major Q-wave present = Yes
0	Major Q-wave present = No
.T or **.**M or **.**	Missing value

Table of assignment of values to QWAVEM27

QWAVEM27	ECGCFLAG	ECGC09[*]	ECGC10[*]	ECGC11[*]	ECGC24[*]
1	1	11-17	any	any	nonmiss & not 4 and not 1 or 11
		any	11-17	any	
		any	any	11-17	
0	1	nonmiss & not 11-17	Nonmiss & not 11-17	nonmiss & not 11-17	any
.T	1	11-17	any	any	4 or 1 or 11 or missing
		any	11-17	any	
		any	any	11-17	
.M	0	any	any	any	any
Missing	Any other combination of values				

[*] The values for these variables in this table correspond to the last two digits of the Minnesota codes: that is, the initial 1 contained in the Minnesota codes has been dropped.

[**] A value of 1 for this variable corresponds to Minnesota codes 7-1-1 or 7-1-2. A value of 4 corresponds to Minnesota code 7-4.

Variable	Description	Range of possible values
ECGCFLAG	Whether composite ECG Record with Adjudicated Values is present or not	
ECGC09	Q-Q.S. Pattern I, aVL, V6	1-1-x, 1-2-x, 1-3-x
ECGC10	Q-Q.S. Pattern II, III, aVF	1-1-x, 1-2-x, 1-3-x
ECGC11	Q-Q.S. Pattern V1-V5	1-1-x, 1-2-x, 1-3-x
ECGC24	Ventricular Conduction Defect	7-1-1 through 7-8

3.6   QWAVE28B (Minor Q-Wave present with ST or T codes and no 7-1-1, 7-1-2, or 7-4 codes from Adjudicated ECG Records)

QWAVE28B		Minor Q-Wave present with ST or T codes and no 7-1-1, 7-1-2, or 7-4 codes from Adjudicated ECG Records
N	Value	Description
43	M	Missing value
14208	0	No
18	1	Yes
79		Missing

In this definition, minor Q-wave corresponds to Minnesota codes 1-2-x, ST segment corresponds to codes

4-x, and T-wave corresponds to definition B in the ARIC ECG Manual. The variable assumes the following values according to the table below.

Value	Description
1	Minor Q-wave present = Yes.
0	Minor Q-wave present = No.
T or M. or .	Missing value.

Table of assignment of values to QWAVE28B

QWAVE28B	ECGMBFLG	ECGMB09, 10, 11[*]	ECGMB12 - ECGMB17[**]	ECGMB24[+]
1	1	ECGMB09= (21-25, 27, or 28) or ECGMB10= (21-25, 27, or 28) or ECGMB11= (21-25, 27, or 28)	ECGMB12 = 2, 11, or 12 / ECGMB13 = 2, 11 or 12 / ECGMB14 = 2, 11, or 12 / ECGMB15 = 1 or 2 / ECGMB16 = 1 or 2 / ECGMB17 = 1 or 2	nonmiss and not (1, 4, or 11)
0	1	nonmiss & not (21-25, 27, or 28)	any	any
0	1	any	(ECGMB12, ECGMB13, and ECGMB14 not missing & not 2, 11, & 12) and (ECGMB15, ECGMB16, and ECGMB17 not 1 & 2 and not missing)	any
.T	1	Values of ECGMB09-11 and ECGMB12-17 that would give QWAVE28B = 1		1, 4, or 11 or missing
.M	0	any	any	any
missing	Any other combination of values			

[*] The values for these variables in this table correspond to the last two digits of the Minnesota codes: that is, the initial 1 contained in the Minnesota codes has been dropped.

[**] The values for these variables correspond to the last one or two digits of the Minnesota codes: that is, for variables ECGMB12-ECGMB14, the initial 4 contained in the Minnesota codes has been dropped, and for variables ECGMB15-ECGMB17, the initial 5 contained in the Minnesota codes has been dropped.

[+] A value of 1 for this variable corresponds to Minnesota codes 7-1-1 or 7-1-2. A value of 4 corresponds to Minnesota code 7-4.

Variable	Description	Range of Possible Values
ECGMBFLG	Whether composite ECG Record with Adjudicated Values is present or not	
ECGMB09	Q-Q.S. Pattern I, aVL, V6	1-1-x, 1-2-x, 1-3-x
ECGMB10	Q-Q.S. Pattern II, III, aVF	1-1-x, 1-2-x, 1-3-x
ECGMB11	Q-Q.S. Pattern V1-V5	1-1-x, 1-2-x, 1-3-x
ECGMB12	ST Junction & Segment Depression I, aVL, V6	4-1-1 through 4-4
ECGMB13	ST Junction & Segment Depression II, III, aVF	4-1-1 through 4-4
ECGMB14	ST Junction & Segment Depression V1-V5	4-1-1 through 4-4
ECGMB15	T Wave I, aVL, V6	5-1 through 5-4
ECGMB16	T Wave II, III, aVF	5-1 through 5-4
ECGMB17	T Wave V1-V5	5-1 through 5-4
ECGMB24	Ventricular Conduction Defect	7-1-1 through 7-8

3.7 QWVEM28B (Minor Q-wave present with ST or T codes and no 7-1-1. 7-1-2, or 7-4 codes, from Original Machine Coded ECG Records)

QWVEM28B		Same As QWAVE28b But Uses Machine Code
N	Value	Description
43	M	Missing value
14177	0	No
49	1	Yes
79		Missing

In this definition, minor Q-wave corresponds to Minnesota codes 1-2-x, ST segment corresponds to codes 4-x, and T-wave corresponds to codes 5-1 or 5-2. This numeric Visit 2 variable is based on definition B in the ARIC ECG Manual. The variable assumes the following values according to the table below.

Value	Description
1	Minor Q-wave present = Yes.
0	Minor Q-wave present = No.
T or M. or .	Missing value.

Table of assignment of values to QWVEM28B

QWVEM28B	ECGCFLAG	ECGC09, 10, 11[*]	ECGC12-ECGC17[**]	ECGC24[+]
1	1	ECGC09= (21-25, 27, or 28) or ECGC10= (21-25, 27, or 28) or ECGC11= (21-25, 27, or 28)	ECGC12 = 2, 11 or 12	nonmiss and not (1,4,or 11)
1	1	nonmiss & not (21-25, 27, or 28)	ECGC13 = 2, 11 or 12 / ECGC14 = 2, 11 or 12 / ECGC15 = 1 or 2 / ECGC16 = 1 or 2 / ECGC17 = 1 or 2 / any	any
0	1		(ECGC12, ECGC13, and ECGC14 not missing & not 2, 11, & 12) and (ECGC15, ECGC16, and ECGC17 not missing & not 1 & 2)	any
		Values of ECGC09-11 and ECGC12-17 that would give QWVEM28B = 1	1, 4, 11, or missing	
.T	0	any	any	a y
.M	Any other combination of values			

[*] The values for these variables in this table correspond to the last two digits of the Minnesota codes: that is, the initial 1 contained in the Minnesota codes has been dropped.

[**] The values for these variables correspond to the last one or two digits of the Minnesota codes: that is, for variables ECGC12-ECGC14, the initial 4 contained in the Minnesota codes has been dropped, and for variables ECGC15-ECGC17, the initial 5 contained in the Minnesota codes has been dropped.

[+] A value of 1 for this variable corresponds to Minnesota codes 7-1-1 or 7-1-2. A value of 4 corresponds to Minnesota code 7-4.

Variable	Description	Range of Possible Values
ECGCFLAG	Whether original machine coded ECG is present or not	
ECGC09	Q-Q.S. Pattern I, aVL, V6	1-1-x, 1-2-x and 1-3-x
ECGC10	Q-Q.S. Pattern II, III, aVF	1-1-x, 1-2-x and 1-3-x
ECGC11	Q-Q.S. Pattern V1-V5	1-1-x, 1-2-x and 1-3-x
ECGC12	ST Junction & Segment Depression I, aVL, V6	4-1-1 through 4-4
ECGC13	ST Junction & Segment Depression II, III, aVF	4-1-1 through 4-4
ECGC14	ST Junction & Segment Depression V1-V5	4-1-1 through 4-4
ECGC15	T Wave I, aVL, V6	5-1 through 5-4
ECGC16	T Wave II, III, aVF	5-1 through 5-4
ECGC17	T Wave V1-V5	5-1 through 5-4
ECGC24	Ventricular Conduction Defect	7-1-1 through 7-8

3.8 PRVCHD21 (V2 Prevalent Coronary Heart Disease: Reported history of CHD at V1 + adjudicated CHD events by V2)
(UC3508.02)

PRVCHD21		V2 Prevalent Coronary Heart Disease
N	Value	Description
13221	0	No
824	1	Yes
303		Missing

This is a numeric variable which assumes the following values according to the table below.

Value	Description
1	Coronary Heart Disease = Yes.
0	Coronary Heart Disease = No.
.T or .	Missing value

Table of Assignments

		PRVCHD05	IN_97SP	DATEISP
PRVCHD21 = 1		1	any	
		any	1	< V1DATE01 + 3*365
		0	not 1	any

PRVCHD21 = 0	0	1	> V1DATE01 + 3*365
PRVCHD21 = .	Any other combination of values		

PRVCHD05:   Reported history of Coronary Heart Disease at V1.
IN_97SP: Fatal CHD, MI, silent MI, coronary artery bypass surgery, angioplasty by 1997.
DATEISP: Date of IN_97SP
V1DATE01:   Visit 1 date

3.9   PRVCHD22 (V2 Prevalent CHD - unverified)
(UC3508.02)

PRVCHD22		V2 Prevalent CHD - Unverified
N	Value	Description
115	T	Missing value
13023	0	No
1045	1	Yes
165		Missing

This is a numeric Visit 2 variable which assumes the following values according to the table below.

Value	Description
1	Coronary Heart Disease = Yes.
0	Coronary Heart Disease = No.
.T or .	Missing value.

PRVCHD22	ECGMI24	HXOFMI21	PHEB04	PHEB05A	PHEB06	PHEB07A
1	1	any	any	any	any	any
	any	1	any	any	any	any
	any	any	not N	Y	any	any
	any	any	any	any	not N	Y
0	0	0	any	N	any	N
					N	not Y
			N	not Y	any	N
					N	not Y
.T	missing	not 1	any	not Y	any	not Y
	not 1	missing	any	not Y	not N	not Y
	not 1	not 1	N	Y	any	not Y
	not 1	not 1	Y	missing	any	not Y
	not 1	not 1	any	not Y	N	Y
	not 1	not 1	any	not Y	Y	missing
missing	Any other combination of values					

ECGMI24:   V2 MI According to Adjudicated ECG.
MDDXMI21:   V2 MD Diagnosed Myocardial Infarction.
PHEB04:   Heart, neck or leg surgery? Y, N
PHEB05A: Coronary Bypass. Y, N
PHEB06:   Balloon angioplasty on heart or legs? Y, N
PHEB07A: Angioplasty of Coronary Artery (ies). Y, N

3.10 MDDXMI21 (V2 MD Diagnosed Myocardial Infarction)

MDDXMI21		V2 MD Diagnosed Myocardial Infarction
N	*Value*	*Description*
13594	0	No
754	1	Yes

This is a numeric Visit 2 variable which assumes the following values according to the table below.

Value	Description
1	Reported MD Diagnosed MI = Yes.
0	Reported MD Diagnosed MI = No.
.T or .	Missing value.

Table of assignment of values to MDDXMI21

MDDXMI21		CONSIDER CONTACT YEARS 2, 3, 4			
	HHXB05C	AFUx07	AFUx17	AFUx18	AFUx19
1	Y	any	any	any	any
	any	Y	Y	Y	H
0	N	any	any	any	not H
	not Y	Y	Y	Y	0
	not Y	Y	Y	N	missing
	not Y	Y	N	N or missing	missing
	not Y	N	N or missing	missing	missing
.T		missing	any	any	any
		Y	missing	any	any
		Y	Y	Y	missing
		Y	Y	missing	any
		Y	N	Y	any
		Y	N	missing	H or O
		N	Y	any	any
		N	missing	Y or N	any
		N	missing	missing	H or O
missing	any other pattern of response				

HHXB05C: Has a doctor ever told you that you had a heart attack? Y, N, U (Unknown)
AFUx07: Have you ever had any pain or discomfort in your chest? Y, N

AFUx17: Have you ever had a severe pain across the front of your chest lasting for half an hour or more? Y, N
AFUx18: Did you see a doctor because of this pain? Y, N
AFUx19: What did he say it was? H (Heart Attack), O (Other Disorder)

Note: The algorithm below requires use of Annual Follow-up (AFUx) variables from contact years 2, 3, 4 (afua223, afua323, afub323, afub423, afuc323, afuc423).

Algorithm:

1. If   HHXB05C = Y or
         ((AFUx07 =Y) and (AFUx17 = Y) and (AFUx18 = Y) and (AFUx19 = H))

   then set MDDXMI21 = 1   (Positive)

2.   If   (HHXB05C = N & AFUx19 ne H) or
              [(AFUx07 = Y & AFUx17 =Y) & (AFUx18 = Y and AFUx19 = O)] or
              [(AFUx07 = Y & AFUx17 = Y) & (AFUx18 = N and AFUx19 = missing)] or
              [(AFUx07 = Y & AFUx17 = N) & (AFUx18 = missing & AFUx19=missing)]or
              [(AFUx07 = N & AFUx17 = missing) & (AFUx18 = missing & AFUx19 = missing)]

       then set MDDXMI21 = 0.   (Negative)

3.   If   [(AFUx07 = missing)]   or
              [(AFUx07 = Y) and (AFUx17 = missing)] or
              [(AFUx07 = Y) and (AFUx17 = Y) and (AFUx18 = Y) & (AFUx19 = missing)] or
              [(AFUx07 = Y) and (AFUx17 = Y) and (AFUx18 = missing)] or
              [(AFUx07 = Y) and (AFUx17 = N) and (AFUx18 = Y or AFUx18 = N)] or
              [(AFUx07 = Y) and (AFUx17 = N) and
               (AFUx18 = missing) and (AFUx19 = H or AFUx19 = 0)]   or
              [(AFUx07 = N) and (AFUx17 = Y or AFUx17 = N)] or
              [(AFUx07 = N) and (AFUx17 = missing) and (AFUx18 = Y or AFUx18 = N)] or
              [(AFUx07 =N) and (AFUx17 = missing) and
               (AFUx18 = missing) and (AFUx19 = H or AFUx19 = 0)]
              then set MDDXMI21 to missing.

3.11 HXOFMI21 (V2 History of Myocardial Infarction)

HXOFMI21		V2 History Of Myocardial Infarction
N	Value	Description
13484	0	No
864	1	Yes

This is a numeric Visit 2 variable which assumes the following values according to the table below.

Value	Description
1	Self or Physician-Reported Heart Attack = Yes.
0	Self or Physician-Reported Heart Attack = No.
.T or .	Missing value.

Table of assignment of values to HXOFMI21

	MDDXMI21	AFUX30
HXOFMI21 = 1	1	any
	any	Y
HXOFMI21 = 0	0	N or U
HXOFMI21 = .T	Not 1	missing
	missing	N or U

HXOFMI21 = .   Any other combination of values

MDDXMI21:   MD Diagnosed Myocardial Infarction.

AFUx30:   Have you been hospitalized for a heart attack? Y, N, U (Unknown)

Note: Definition requires use of Annual Follow-up (AFUx) variables from contact years 2, 3, 4 (afua223, afua323, afub323, afub423, afuc323, afuc423).

3.12 ECGMI24 (Prevalent Myocardial Infarction from Adjudicated Electrocardiograms)

ECGMI24		*Prevalent Myocardial Infarction from Adjudicated ECG*
N	*Value*	*Description*
132	T	Missing value
14132	0	No
84	1	Yes

This is a numeric Visit 2 variable which assumes the following values according to the table below.

Value	**Description**
1	MI from ECG = Yes.
0	MI from ECG = No.
.T or **.**	Missing value.

Table of assignment of values to ECGMI24

	QWAVE27A	QWAVE28B
ECGMI24 = 1	1	any
	any	1
ECGMI24 = 0	0	0
ECGMI24 = .T	missing	not 1
	not 1	missing
ECGMI24 = .	Any other combination of values	

QWAVE27A: Major Q-Wave present with no 7-1-1 or 7-4.

QWAVE28B: Minor Q-Wave present with S or ST and no 7-1-1 or 7-4.

3.13 MACHMI22 (Prevalent Myocardial Infarction from Original Machine Coded Electrocardiograms)

MACHMI22		Previous Myocardial Infarction From Machine Coded
N	*Value*	*Description*
170	T	Missing value
14035	0	No
143	1	Yes

This is a numeric Visit 2 variable which assumes the following values according to the table below.

Value	**Description**
1	MI from ECG = Yes.
0	MI from ECG = No.
.T or .	Missing value.

Table of assignment of values to MACHMI22

	QWAVEM27	QWVEM28B
MACHMI22 = 1	1	any
	Any	1
MACHMI22 = 0	0	0
MACHMI22 = .T	Missing	not 1
	not 1	missing
MACHMI22 = .	Any other combination of values	

QWAVEM27:   Major Q-wave present with no 7-1-1 or 7-4.

QWVEM28B: Minor Q-wave present with S or ST and no 7-1-1 or 7-4.

3.14 PRVCHD23   (Prevalence of CHD at Visit 2, definition 3)

PRVCHD23		Prevalent CHD At V2, Definition 3
N	*Value*	*Description*
13216	0	No
829	1	Yes
303		Missing

PRVCHD23= 1 if PRVCHD05=1 or (IN_00SP=1 and '.'< DATISP<=V2DATE21) or (IN_00SP=1 and V2DATE21= '.' and DATEISP<=V1DATE01 +3*365.25).

PRVCHD23= 0 if PRVCHD05=0 and (IN_00SP=0 or DATISP>V2DATE21>'.') or (V2DATE21= '.' and DATEISP>V1DATE01 +3*365.25)

Else PRVCHD23= '.' (missing)

3.15 PRVSTR21 (Prevalence of Stroke at Visit 2)

PRVSTR21		Prevalent Stroke At V2
N	Value	Description
14040	0	No
275	1	Yes
33		Missing

PRVSTR23= 1 if HOM10D=1 or (IN00DP=1 and .<ED00DP<=V2DATE21) or (IN00DP=1 and V2DATE21=. and ED00DP<=V1DATE01 +3*365.25).

PRVSTR23= 0 if HOM10D=0 and (IN00DP=0 or ED00DP>V2DATE21>.) or (V2DATE21=. and ED00DP>V1DATE01 +3*365.25).

Else PRVSTR23=. (missing)

4   Hypertension

4.1   HYPERT24 (V2 Hypertension, definition 4)

HYPERT24		V2 Hypertension, Definition 4
N	Value	Description
10005	0	No
4285	1	Yes
58		Missing

HYPERT24   =   1   if (SBPB22 = 90) OR
                                [(MSRB24A = Y) and (MSRB02 not equal T)]

                =   0   if (0 SBPB22 < 90) AND
                                {MSRB24A = N or
                                [(MSRB24A = missing) and
                                 (MSRA02 = T)] }

                =   missing Otherwise

4.2   HYPERT25 (V2 Hypertension, definition 5)

HYPERT25		V2 Hypertension, Definition 5
N	Value	Description
9134	0	No
5163	1	Yes
51		Missing

HYPERT25   =   1   if (SBPB22 >= 90) or
                                (SBPB21 .>=140) or
                                     [(MSRB24A = y)   and
                                (MSRB02 ne T)]

                =   0   if (0 < SBPB22 < 90)   and
                                (0 < SBPB21 < 140)   and
                                {MSRB24A = N or [(MSRB24A
                                  = missing) and (MSRB02 = T)]}

                =   missing Otherwise

4.3 HYPERT26 (V2 Hypertension, definition 6)

HYPERT26		V2 Hypertension, Definition 6
N	Value	Description
10038	0	No
4251	1	Yes
59		Missing

HYPERT26 = 1   if (SBPB22 ≥ 95) OR
(SBPB21 ≥ 160) or [(MSRB24A = Y)
and (MSRB02 ≥ T)]

= 0   if (0 ≤ SBPB22 < 95) and
(0 < SBPB21 < 160) and {MSRB24A = N
or [(MSRB24A = missing) and
(MSRB02 = T)]}

= missing   Otherwise

SBPB21:   Systolic blood pressure

SBPB22:   Diastolic blood pressure

MSRB24A: Were any of the medications you took during the past two weeks for high blood pressure? Y, N, U (Unknown)

4.4 LDL22 (V2 Recalculated LDL Cholesterol)

LDL22		V2 Re-Calculated LDL-C In mg/dL
N	Value	Description
14007	Range	0 - 467.4 (median=131.2 mean=133.50 std=36.85)
341		Missing

This is a numeric variable.

Algorithm:

LDL22 = LIPBO1A - LIPB03A - (LIPBO2A/5).

1. If (LIPB01A = missing) or
(LIPB02A = missing) or
(LIPB03A = missing) or
(LIPB02A > 400)

then set LDL22 = missing.   (Missing)

2. If LDL22 = negative

then set LDL22 = 0.   (Negative)

SAS Code:

```
LDL22 = LIPB01A - LIPB03A - LIPB02A/5;
if LIPB02A > 400 then LDL22 = .;
if .z < LDL22 < 0 then LDL22 = 0;
```

LIPB01A : Total cholesterol in mg/dL.

LIPB02A : Total triglycerides in mg/dL.

LIPB03A : HDL cholesterol in mg/dL.

4.5   HDL221 (V2 HDL2 Cholesterol)

This is a numeric variable.

HDL221		V2 HDL (2) Cholesterol In mg/dL
N	Value	Description
13734	Range	0 - 146 (median=12 mean=14.1 std=8.9)
614		Missing

Algorithm:

HDL221=LIPB03A-LIPB04A.

1.   If   (LIPB03A = missing) or
                 (LIPB04A = missing)

        then   set HDL221 = missing.   (Missing)

2.   If   HDL221 = negative
        then   set HDL221 = 0.   (Negative)

SAS Code:

```
HDL221=LIPB03A-LIPB04A;
if .z < HDL221 < 0 then HDL221 = 0;
```

LIPB03A : HDL cholesterol in mg/dL.

LIPB04A : HDL (3) cholesterol in mg/dL.

5   Medication Use

Medication records were collected at each clinic visit. Participants were reminded to bring all medications used in the previous two weeks. Names of the medications were transcribed and coded by the ARIC medication coding system, developed by a pharmacist at UNC. The ARIC medication codes were then mapped to Medi-Span Therapeutic Classification (MTC) codes and American Hospital formulary Service Classification Compilation (AHFSCC) codes. Variable names for the MTC codes are MSRMTC1-MSRMTC17, and MSRAHF1-MSRAHF17 for AHFSCC codes (in file MSRCOD24 for Visit 2). Definitions of the MTC codes are given in Section 14.

5.1   CHOLMD23 (Dicontinued: Replaced by CHOLMDCODE21)

CHOLMDCODE21	Cholesterol Lowering Medication W/In 2wks: Using 2004 Med Code -V2	
N	Value	Description
45	T	
13388	0	No
915	1	Yes

5.2   CHOLMD24 (Dicontinued: Replaced by CHOLMDCODE22)

CHOLMDCODE22	Medications Which Secondarily Affect Cholesterol: Using 2004 Med Code -V2	
N	Value	Description
45	T	
10444	0	No
3859	1	Yes

5.3   CHOLMDCODE21(Cholesterol Lowering Medication using 2004 Med Code)

CHOLMDCODE21	Cholesterol Lowering Medication W/In 2wks: Using 2004 Med Code -V2	
N	Value	Description
45	T	
13388	0	No
915	1	Yes

Algorithm.

If CODE1-CODE17 have at least one of the following: 771030, 390000--399999, then FOUND1 = 1. Else FOUND1 =0. If all CODE1-CODE17 = missing then ALLMISS = 1. Else ALLMISS = 0.

1. If (MSRB02 = F or MSRB02 = missing) and ALLMISS=1 then CHOLMDCODE21 = .T .

2. Else if   [MSRB02 NE T] and FOUND1=1 then set CHOLMDCODE21 = 1.

3. Else if   [MSRB02 = T and ALLMISS=1] or FOUND1=0 then set CHOLMDCODE21 = 0.

4. Otherwise, set CHOLMDCODE21 = .

	FOUND1	ALLMISS	MSRB02
CHOLMDCODE21 = 1	1	0	Not T
CHOLMDCODE21 = 0	0	Any	Any
	Any	1	T
CHOLMDCODE21 = .T	Any	1	F or missing

CODE1--17:   Updated Medication Code number.

MSRB02:   Reason why did not bring all medications.
T (Took no medications),
F (Forgot or was unable to bring medications).

5.4   CHOLMDCODE22 (Medications Which Secondarily Affect Cholesterol Using 2004 Med Code)

CHOLMDCODE22	Medications Which Secondarily Affect Cholesterol: Using 2004 Med Code -V2	
N	Value	Description
45	T	
10444	0	No
3859	1	Yes

Algorithm:

If CODE1-CODE17 have at least one of the following: 331000, 332000, 340000, 363000, 369920, 372000, 376000, 379900 and 379910, then FOUND2 = 1. Else FOUND2 =0.

If all CODE1-CODE17 = missing then ALLMISS = 1. Else ALLMISS = 0.

1. If (MSRB02 = F or MSRB02 = missing) and ALLMISS=1 then CHOLMDCODE22 = .T .

2. Else if   [MSRB02 NE T] and FOUND2=1 then CHOLMDCODE22 = 1.

3. Else if   [MSRB02 = T and ALLMISS=1] or FOUND2=0 then CHOLMDCODE22 = 0.

4. Otherwise, set CHOLMDCODE22 = .

	FOUND2	ALLMISS	MSRB02
CHOLMDCODE22 = 1	1	0	Not T
CHOLMDCODE22 = 0	0	Any	Any
	Any	1	T
CHOLMDCODE22 = .T	Any	1	F or missing

CODE1--17:   Updated Medication Code number.

MSRB02:   Reason why did not bring all medications.
                 T (Took no medications),
                 F (Forgot or was unable to bring medications).

5.5 HYPTMD21 (V2 Hypertension Medications in Past 2 Weeks: Self-reported)

HYPTMD21		Hypertension Meds (Self Reported)
N	Value	Description
66	T	
10389	0	No
3893	1	Yes

This is numeric Visit 2 variable which assumes the following values according to the table below.

Value	Description
1	Took Hypertension Lowering Med. = Yes
0	Took Hypertension Lowering Med. = No

Table of Assignment of Values to HYPTMD21

	MSRB02	MSRB24A
HYPTMD21 = 1	Not T	Y
HYPTMD21 = 0	T	missing
	any	N
HYPTMD21 = .T	Not T	U or missing
	T	Y or U

MSRB02   : Reason why did not bring all medications.
                  T (Took no medications).
                   F (Forgot or was unable to bring medications).

MSRB24A   : High blood pressure medications in past 2 weeks.
                   Y, N, U (Unknown).

Algorithm:

1.   If   (MSRB02 NE T)] and (MSRB24A = Y)

      then   set HYPTMD21 = Yes.

2.   If   (MSRB02 = T and MSRB24A = missing) or
              (MSRB24A = N)

      then set HYPTMD21 = No.

3.   If   (MSRBO2 NE T) and
              (MSRB24A = U or MSRB24A = missing)

      then set HYPTMD21 to missing.

5.6 HYPTMD23 (Discontinued: Replaced with HYPERTMDCODE01)

5.7 HYPTMDCODE21 (Hypertension Lowering Medication within past 2 weeks using updated medication codes)

HYPTMDCODE21	Hypertension Lowering Medication Within Past 2 Weeks (V2)	
N	Value	Description
9610	0	No
4738	1	Yes

HYPTMDCODE21, using updated medication codes, replaces HYPTMD23.

HYPTMDCODE21 is a categorical variable that takes on the values of:

1   Participant has taken hypertension lowering medication in past two weeks

0   Participant has not taken hypertension lowering medication in past two weeks

Z   Unknown whether participant has taken hypertension lowering medication in past two weeks

Definition:

If participants are on medications and reported to have taken an antihypertensive medications within the last two weeks or taking a medication which is classified as an antihypertensive then set HYPTMDCODE21=1.

If participants did not bring any medications because no medications were being taken, and subsequently confirmed they had not taken any medication to lower blood pressure in the last two weeks or confirmed they had no medications listed, or participants who were taking medications but did not report having taken an antihypertensive within the last two weeks/did not know if they were taking an antihypertensive medication within the last two weeks and none of their listed medications could be classified as an antihypertensive then HYPTMDCODE21=0.

Classify all other participants who meet neither the criteria for 1 or 0 as missing.

Algorithm

I Create variable ALLMISS: ALLMISS= 1 if all the CODE1-17 are blank. Otherwise, ALLMISS=0.

II Create variables HBPMED
a. HBPMED=1 if ALLMISS=0 AND at least one of the CODE1-17= 330000-339999 or 340000-349999 or 360000-369999 or 370000-379999

b. HBPMED=0 if ALLMISS=1 or [ALLMISS=0 AND none of the CODE1-17=330000-339999 or 340000-349999 or 360000-369999 or 370000-379999]

III. Create HYPTMDCODE21
       HYPTMDCODE21=1
             If (MSRB02 ^T & Msrb24a = Y) or (MSRB02^T & HBPMED=1)

       HYPTMDCODE21 = 0
             If MSRB02 = T & Msrb24a=N
             Or
             If MSRB02=T & Msrb24a=Blank & ALLMISS=1
             Or
             If MSRB02=T & Msrb24a^=Y & HBPMED= 0

HYPTMDCODE21= Missing otherwise

Table of Assignment

		MSRB02	MSRB24A	HBPMED	ALLMISS
Hyptmdcode21 = 1	Not T	Y	Any	Any
		Any	1	Any
Hyptmdcode21 = 0	T	N	Any	Any
		Blank	Any	1
	Not T	N, U, Blank	0	Any
Hyptmdcode21 = Missing	Any other combinations			

MSRB02:   Reason why did not bring all medications.
              T (Took no medications),
              F (Forgot or was unable to bring medications).

CODE1--17:   Updated Medication Code number.

MSRB24A: High blood pressure medications in past two weeks.
              Y, N, U (Unknown)

Algorithm:

1.   If   [MSRB02 NE T)] and [(MSRB24A = Y)   or
              (MSBM04B-MSBM20B have at least one of the following MTC codes:

              330000-333000, 340000-349999, 360000-369920, 370000-379920)]

      then set HYPTMD23 = 1

2.   If   [(MSRB02 = T) and (all MSBM04B-MSBM20B = missing) and
              (MSRB24A = Blank] or [MSRB02 = T and MSRB24A = N] or
              [(MSRB02 NE T) and (MSRB24A = N or MSRB24A = U or MSRB24A =   missing)
and (MSBM04B-MSBM20B do not have any of the following MTC   codes: 330000-333000,
340000-349999, 360000-369920, 370000-379920)]

      then set HYPTMD23 = 0.

3.   If none of the above conditions are met

      then set HYPTMD23 to missing.

MSRB02   : Reason why did not bring all medications.
               T (Took no medications),
               F (Forgot or was unable to bring medications)

MSBMO4B-MSBM20B : Medication Code number.

MSRB24A   : High blood pressure medications in past two weeks.
               Y, N, U (Unknown)

MTC code 330000 :   Beta Blockers.
MTC code 331000 :   Beta Blockers, non-selective.

MTC code 332000 :   Beta Blockers, cardio-selective.
MTC code 333000 :   Beta Blockers, Alpha-beta blockers.
MTC code 340000 :   Calcium Channel Blockers.
MTC code 360000 :   Antihypertensive.
MTC code 361000 :   ACE Inhibitors.
MTC code 362000 :   Adrenolytic Antihypertensive.
MTC code 362010 :   Adrenolytic Antihypertensive - Central.
MTC code 362020 :   Adrenolytic Antihypertensive - Peripheral.
MTC code 362030 :   Reserpine.
MTC code 363000 :   Alpha-blockers.
MTC code 364000 :   Vasodilators.
MTC code 365000 :   Antihypertensive - MAOIs.
MTC code 366000 :   Miscellaneous Antihypertensive.
MTC code 369900 :   Antihypertensive combinations.
MTC code 369910 :   Antihypertensive combinations Reserpine.
MTC code 369920 :   Antihypertensive combinations Beta-blockers.
MTC code 370000 :   Diuretics.
MTC code 371000 :   Carbonic Anhydrase Inhibitors.
MTC code 372000 :   Loop Diuretics.
MTC code 373000 :   Mercurial Diuretics.
MTC code 374000 :   Osmotic Diuretics.
MTC code 375000 :   Potassium Sparing Diuretics.
MTC code 376000 :   Thiazides.
MTC code 379900 :   Combination Diuretics.
MTC code 379910 :   Diuretics - Potassium
MTC code 379920 :   Non-prescription Diuretics.

5.8 ANTICOAGCODE21 (Anticoagulant use in the past 2 weeks based on 2004 medication codes)

ANTICOAGCODE21		Used Anticoagulates (At Visit 2) Last 2 Weeks (0=no, 1=yes) Based On 2004 Med Code
N	Value	Description
14180	0	No
121	1	Yes
47		Missing

This is a numeric Visit 2 variable which assumes the following values according to the table below.

Value Description
1 Anticoagulant medication found
0 No Anticoagulant medication found

Definition:
If at least one of the 17 medication code variables from the Medication Survey Form (MSRB: Q4M01B, Q4M02B, …, Q4M17B; termed CODE1-CODE17) contained "83"then the anticoagulant flag would have a value of 1, otherwise, the anticoagulant flag would contain a 0.

If a participant brought all or some of their medication to the clinic or if they forgot their medication (but stated that they do take medication) and the anticoagulant flag has a value of 1 then ANTICOAGCODE21=1 for "Anticoagulant medication found".

ANTICOAGCODE21=0 for "No Anticoagulant medication found" if a participant has at least one medication in the 17 medication code variables, but none of them contain "83". ANTICOAGCODE21 takes a missing

value for any other combination not mentioned.

Table of assignment of values to ANTICOAGCODE21

		MSRB01	MSRB02	ANYMED	ANTICOAG_FLAG
ANTICOAGCODE21=1		N	F	1	1
		Y, S	missing		
ANTICOAGCODE21=0		N	missing	1	0
		N	F	1	0
		N	T	0	0
		Y, S	missing	1	0
		S	F	1	0

MSRB01: Bring all medication from last 2 weeks?
Y Yes, brought all medication
S brought some medication
N No, brought no medication

MSRB02: Reason why did not bring all medications.
T Took no medications
F Forgot or was unable to bring medications

ANYMED
1 any medications recorded in CODE1-CODE17
0 no medications recorded in CODE1-CODE17

ANTICOAG_FLAG
1 ANYMED=1 AND value of "83" found in CODE1-CODE17
0 ANYMED=0 or ANYMED=1 and no "83" found in CODE1-CODE17

Algorithm:
1. Create variable ANYMED.
ANYMED=1 if any medication codes are recorded in CODE1-CODE17. ANYMED=0 if no medication codes are present. ANYMED= missing if no MSRB is present.

2. Create variable ANTICOAG_FLAG. ANTICOAG_FLAG=1 if ANYMED=1 and CODE1-CODE17 contains the first two numbers "83". ANTICOAG_FLAG=0 otherwise.

3. Create variable ANTICOAGCODE21.
ANTICOAGCODE21=1
        If MSRB1='N' and MSRB02= 'F' and ANTICOAG_FLAG=1
            Or
        If (MSRB01= 'Y' or 'S') and ANTICOAG_FLAG=1

ANTICOAGCODE21=0
        If MSRB01='N' and MSRB02=missing and ANYMED=1 and ANTICOAG_FLAG=0
            Or
        If MSRB01='N' and MSRB02='F' and ANYMED=1 and ANTICOAG_FLAG=0
                Or
        If MSRB01='N' and MSRB02='T' and ANYMED=0 and ANTICOAG_FLAG=0
                Or
        If MSRB01='Y', 'S' and MSRB02=missing and ANYMED=1 and ANTICOAG_FLAG=0
                Or
        If MSRB01='S' and MSRB02='F' and ANYMED=1 and ANTICOAG_FLAG=0

ANTICOAGCODE21=Missing for all other combinations.

5.9 ASPIRINCODE21 (Aspirin use in the past 2 weeks based on 2004 medication codes)

ASPIRINCODE21		Used Aspirin-Containing Analgesics (At Visit 2) In Last 2 Weeks (0=no, 1=yes), Based On 2004 Med Code
N	Value	Description
7027	0	No
7274	1	Yes
47		Missing

This is a numeric Visit 2 variable which assumes the following values according to the table below.

Value Description
1 Aspirin containing medication found
0 No aspirin containing medication found

Definition:
If at least one of the 17 medication code variables from the Medication Survey Form (MSRB: Q4M01B, Q4M02B, …, Q4M17B; termed CODE1-CODE17) contained: "6410", "6499", "6599", or "6420" then the aspirin flag would have a value of 1, otherwise, the aspirin flag would contain a 0.

If a participant brought all or some of their medication to the clinic or if they forgot their medication (but stated that they do take medication) and the aspirin flag has a value of 1 then Aspirincode21=1 for "Aspirin containing medication found".

ASPIRINCODE21=0 for "No aspirin containing medication found" if a participant has at least one medication in the 17 medication code variables, but none of them contain "6410", "6499", "6599", or "6420". ASPIRINCODE21 takes a missing value for any other combination not mentioned.

Table of assignment of values to ASPIRINCODE21

	MSRB01	MSRB02	ANYMED	ASPIRIN_FLAG
ASPIRINCODE21=1	N	F	1	1
	Y, S	missing		
ASPIRINCODE21=0	N	missing	1	0
	N	F	1	0
	N	T	0	0
	Y, S	missing	1	0
	S	F	1	0

MSRB01: Bring all medication from last 2 weeks?
Y Yes, brought all medication
S brought some medication
N No, brought no medication

MSRB02: Reason why did not bring all medications.
T Took no medications
F Forgot or was unable to bring medications

ANYMED
1 any medications recorded in CODE1-CODE17
0 no medications recorded in CODE1-CODE17

ASPIRIN_FLAG
1 ANYMED=1 AND value of "6410", "6499", "6599", or "6420" found in CODE1-CODE17
0 ANYMED=0 or ANYMED=1 and no "6410", "6499", "6599", or "6420" found in CODE1-CODE17

Algorithm:
1. Create variable ANYMED.
ANYMED=1 if any medication codes are recorded in CODE1-CODE17. ANYMED=0 if no medication
codes are present. ANYMED= missing if no MSRB is present.

2. Create variable ASPIRIN_FLAG. ASPIRIN_FLAG=1 if ANYMED=1 and CODE1-CODE17 contains the
first four numbers "6410", "6499", "6599", or "6420". ASPIRIN_FLAG=0 otherwise.

3. Create variable ASPIRINCODE01.
ASPIRINCODE21=1
        If MSRB1='N' and MSRB02= 'F' and ASPIRIN_FLAG=1
                Or
        If (MSRB01= 'Y' or 'S') and ASPIRIN_FLAG=1

ASPIRINCODE21=0
        If MSRB01='N' and MSRB02=missing and ANYMED=1 and ASPIRIN_FLAG=0
                Or
        If MSRB01='N' and MSRB02='F' and ANYMED=1 and ASPIRIN_FLAG=0
                Or
        If MSRB01='N' and MSRB02='T' and ANYMED=0 and ASPIRIN_FLAG=0
                Or
        If MSRB01='Y', 'S' and MSRB02=missing and ANYMED=1 and ASPIRIN_FLAG=0
                Or
        If MSRB01='S' and MSRB02='F' and ANYMED=1 and ASPIRIN_FLAG=0

ASPIRINCODE21=Missing for all other combinations.

5.10 STATINCODE21 (Statin use in the past 2 weeks based on 2004 medication codes)

STATINCODE21		Used Statin (At Visit 2) Last 2weeks (0=no, 1=yes) Based On 2004 Med Code
N	Value	Description
13952	0	No
349	1	Yes
47		Missing

This is a numeric Visit 2 variable which assumes the following values according to the table below.

Value Description
1 Statin medication found
0 No Statin medication found

Definition:
If at least one of the 17 medication code variables from the Medication Survey Form (MSRB: Q4M01B,
Q4M02B, …, Q4M17B; termed CODE1-CODE17) contained "3940"then the Statin flag would have a value
of 1, otherwise, the Statin flag would contain a 0.

 If a participant brought all or some of their medication to the clinic or if they forgot their medication (but
stated that they do take medication) and the Statin flag has a value of 1 then STATINCODE21=1 for "Statin
medication found".

STATINCODE21=0 for "No Statin medication found" if a participant has at least one medication in the 17 medication code variables, but none of them contain "3940". STATINCODE21 takes a missing value for any other combination not mentioned.

Table of assignment of values to STATINCODE21

	MSRB01	MSRB02	ANYMED	STATIN_FLAG
STATINCODE21=1	N	F	1	1
	Y, S	missing		
STATINCODE21=0	N	missing	1	0
	N	F	1	0
	N	T	0	0
	Y, S	missing	1	0
	S	F	1	0

MSRB01: Bring all medication from last 2 weeks?
Y Yes, brought all medication
S brought some medication
N No, brought no medication

MSRB02: Reason why did not bring all medications.
T Took no medications
F Forgot or was unable to bring medications

ANYMED
1 any medications recorded in CODE1-CODE17
0 no medications recorded in CODE1-CODE17

STATIN_FLAG
1 ANYMED=1 AND value of "3940" found in CODE1-CODE17
0 ANYMED=0 or ANYMED=1 and no "3940" found in CODE1-CODE17

Algorithm:
1. Create variable ANYMED.
ANYMED=1 if any medication codes are recorded in CODE1-CODE17. ANYMED=0 if no medication codes are present. ANYMED= missing if no MSRB is present.

2. Create variable STATIN_FLAG. STATIN_FLAG=1 if ANYMED=1 and CODE1-CODE17 contains the first four numbers "3940". STATIN_FLAG=0 otherwise.

3. Create variable STATINCODE21.
STATINCODE21=1
    If MSRB01='N' and MSRB02= 'F' and STATIN_FLAG=1
        Or
    If (MSRB01= 'Y' or 'S') and STATIN_FLAG=1

STATINCODE21=0
    If MSRB01='N' and MSRB02=missing and ANYMED=1 and STATIN_FLAG=0
        Or
    If MSRB01='N' and MSRB02='F' and ANYMED=1 and STATIN_FLAG=0
        Or
    If MSRB01='N' and MSRB02='T' and ANYMED=0 and STATIN_FLAG=0
        Or
    If MSRB01='Y', 'S' and MSRB02=missing and ANYMED=1 and STATIN_FLAG=0
        Or
    If MSRB01='S' and MSRB02='F' and ANYMED=1 and STATIN_FLAG=0

STATINCODE21=Missing for all other combinations

6   Nutrition Derived Variables

(File TOTNUT2)

6.1   Nutrition Derived Variables

Note: The variables contained in the TOTNUT2 data were created from a program developed by Tomoko Shimakawa and were approved by the ARIC Nutrition Working Group. These variables replaced the variables in the NUTRV2 data set and, unless specifically requested otherwise, should be used in official ARIC analyses.

The data set containing nutrition derived variables is named TOTNUT2. It contains 77 variables: 65 daily nutrient intake variables, 11 variables containing percentages of energy from macronutrients, and ID. These variables, unlike the variables contained in the DTIB data set, include nutrient intake from food. Only values for participants meeting the ARIC Nutrition Working Group's criteria for analysis are included in this data set (see description of variable INCLUDE in attached memo).

The attached memo describes in detail how values for these variables are calculated.

Table 1:Names and descriptions of 78 variables (nutrients from beer, wine and hard liquor are included).

Number	Variable names	Description
65 total nutrient variables		
1	TCAL	energy intake in kilocalories
2	PROT	protein in grams
3	AFAT	animal fat in grams
4	VFAT	vegetable fat in grams
5	CARB	carbohydrate in grams
6	CFIB	crude fiber in grams
7	DFIB	dietary fiber in grams
8	CALC	calcium in milligrams
9	IRON	iron in milligrams
10	MAGN	magnesium in milligrams
11	PHOS	phosphorus in milligrams
12	POTA	potassium in milligrams
13	ZINC	zinc in milligrams
14	VITC	vitamin C in milligrams
15	VITB1	thiamine in milligrams
16	VITB2	riboflavin in milligrams
17	NIAC	niacin in milligrams
18	VITB6	vitamin B6 in milligrams
19	FOLA	folate in micrograms
20	RETI	retinol in International Units
21	CARO	total carotenoid in International Units
22	VITA	total vitamin A in International Units
23	SFAT	saturated fat in grams
24	MFAT	monounsaturated fat in grams
25	F181	fatty acid 18.1 in grams
26	PFAT	polyunsaturated fat in grams

Number	Variable names	Description
27	F182	fatty acid 18.2 in grams
28	CHOL	dietary cholesterol in milligrams
29	METH	methionine in grams
30	VITD	vitamin D in International Units
31	ALCO	alcohol intake in grams
32	VITE	alpha-tocopherol in milligrams
33	CAFF	caffeine in milligrams
34	VITB12	vitamin B12 in micrograms
35	PANT	pantothenic acid in milligrams
36	SUCR	sucrose in grams
37	SODI	sodium in milligrams
38	APROT	animal protein in grams
39	LACT	lactose in grams
40	TRYP	tryptophan in milligrams
41	MANG	manganese in milligrams
42	OMEGA	fatty acids w20.5 and w22.6 in grams
43	COPP	copper in milligrams
44	FRUC	fructose in grams
45	F183	fatty acid 18.3 in grams
46	F40	fatty acid 4.0 in grams
47	F60	fatty acid 6.0 in grams
48	F80	fatty acid 8.0 in grams
49	F100	fatty acid 10.0 in grams
50	F120	fatty acid 12.0 in grams
51	F140	fatty acid 14.0 in grams
52	F160	fatty acid 16.0 in grams
53	F180	fatty acid 18.0 in grams
54	F161	fatty acid 16.1 in grams
55	F201	fatty acid 20.1 in grams
56	F221	fatty acid 22.1 in grams
57	F184	fatty acid 18.4 in grams
58	F204	fatty acid 20.4 in grams
59	F205	fatty acid 20.5 in grams
60	F225	fatty acid 22.5 in grams
61	F226	fatty acid 22.6 in grams
62	GLUT	glutamic acid in grams
63	ASPA	aspartic acid in grams
64	FATE	animal fat without visible fat in grams
65	CALF	energy intake without visible fat in kilocalories

11 derived variables

Number	Variable names	Description
66	TFAT	total fat in grams = AFAT+VFAT
67	P.TFAT	percentages of daily total energy intake from total fat
68	P.ALC	percentages of daily total energy intake from alcohol
69	P.PROT	percentages of daily total energy intake from protein
70	P.AFAT	percentages of daily total energy intake from animal fat

Number	Variable names	Description
71	P.VFAT	percentages of daily total energy intake from vegetable fat
72	P.CARB	percentages of daily total energy intake from carbohydrate
73	P.SFAT	percentages of daily total energy intake from saturated fat
74	P.MFAT	percentages of daily total energy intake from monounsaturated fat
75	P.PFAT	percentages of daily total energy intake from polyunsaturated fat

$$KeysScore = 1.26(2\_P.SFAT - P.PFAT) + 1.5\sqrt{CHOL\_\_}$$

Number	Variable names	Description
76	KEYS	

Other variables

Number	Variable names	Description
77	INCLUDE	YES, NO1, NO2
78	ID	

6.2   Description of the SAS program

The goal of the program is to create a new SAS data set TOTNUT2 that contains 78 variables: ID, 65 daily total nutrient values (sum of daily nutrient intakes from 66 food items and nutrient intakes from alcoholic beverages), 11 nutrient variables that are derived from these total nutrient values including percentages of energy from macronutrients, and a binary variable INCLUDE to indicate participants who meet the ARIC Nutrition Working Group's inclusion criteria for analysis. Table 1 lists names and brief descriptions of these variables.

The attached hard copy of the program is written for Exam 1 data, but it can be used for Exam 2 data by replacing data set names and variable names. The rest of the memo describes these 78 variables in detail and explains how these variables are created in the SAS program.

1.   Description of 65 total nutrient variables

Total nutrient variables are sums of daily nutrient intakes from 66 foods and daily nutrient intakes from alcoholic beverages. The ARIC SAS data set NUTRV2 contains participants' daily intakes of 90 nutrients that are calculated from the ARIC 66 food item-frequency questionnaire by Willett. Another ARIC SAS data set DTIB contains participants" weekly frequencies of consuming wine, beer, and liquor. Using the weekly alcohol consumption data and Willett's nutrient database for wine, beer, and liquor, daily intakes of 90 nutrients from alcoholic beverages will be computed. However, the calculation of daily nutrient intakes from alcoholic beverages depends on each participant's alcohol drinking status. Classify each participant into a current drinker, a former drinker, or a never drinker using the definition for the DRNKR01 variable in the ARIC SAS data set DERIVED. Do not use the DRNKR01 variable to classify participants unless DRNKR01 is updated using the latest DTIB data.

    X   If a participant is a current drinker, compute daily intakes of 90 nutrients from wine, beer and liquor using weekly consumption data of these beverages (DTIB96 - DTIB98 in the ARIC SAS data set DTIB) and Willett's nutrient database for these beverages (entered in pages 1-2 of my SAS program as a data set ALCDRNK). These daily intakes of 90 nutrients from wine, beer and liquor will be added to daily intakes of 90 nutrients from 66 food items (NUTRV2A01 - NUTRV2A90) to obtain daily total intakes of 90 nutrients (TNUTA01 - TNUTA90). See page 3 or my SAS program for computation.

        The ALCDRNK data contains 274 variables; weight of one serving of wine (4oz glass = 116g), 90 nutrient values (NUTRV2A01 - NUTRV2A90) for one serving of wine, weight of one serving of beer (12oz can = 360g), 90 nutrient values (NUTRV2A01 - NUTRV2A90) for one serving of beer, weight of one serving of liquor (1.5oz shot = 45g), 90 nutrient values (NUTRV2A01 - NUTRV2A90) for one serving of liquor, and a new variable MERGEID (= 1).

X   If a participant is a former drinker or a never drinker, assign a zero value to the daily total alcohol intake TNUT33. Other 89 daily total nutrients (TNUTA01 - TNUTA32, TNUTA34 - TNUTA90) will be the same as 89 nutrient intakes from 66 food items (NUTRV2A01 - NUTRV2A32, NUTRV2A34 - NUTRV2A90).

X   If a participant's drinking status cannot be determined, assign a null value to TNUTA33. Other 89 daily total nutrients (TNUTA01 - TNUTA32, TNUTA34 - TNUTA90) will be the same as 89 nutrient intakes from 66 food items (NUTRV2A01 - NUTRV2A32, NUTRV2A34 - NUTRV2A90).

25 of 90 daily total nutrient intakes (TNUTA numbers 8, 9, 13, 14, 15, 16, 18, 19, 20, 22, 30, 31, 32, 35, 36, 40, 42, 45, 46, 47, 48, 49, 52, 53, 88) are not useful to use because they are not calculated by Willett's algorithm. See Table 1 for 65 daily total nutrient intakes that will be included in our new SAS data set TOTNUT2.

2.   Description of 11 derived variables

Using variables defined in Section 1, eleven variables will be created. See Table 1. Calculate the total fat intake by adding the animal fat intake to the vegetable fat intake. To calculate percentages of daily total energy intakes from 8 nutrients, assume that one gram of fat, alcohol, protein and carbohydrate contains 9 kilocalories, 7 kilocalories, 4 kilocalories and 4 kilocalories of energy, respectively. Calculate Keys score as follows: $1.26(2S - P) + 1.5Z$, were S is the percentage of energy from saturated fat, P is the percentage of energy from polyunsaturated fat, and Z is the square root of dietary cholesterol, expressed as mg/1,000kcal/day. This equation is from a paper by Anderson *et al.* on Preventive Medicine 1979;8:525-37.

3.   Description of a binary variable INCLUDE

A binary variable INCLUDE will be created to indicate participants who meet our inclusion criteria for dietary analysis. Participants will have a value "YES" if they meet the following four criteria. See pages 5-6 of the SAS program.

1.   Both DTIB and NUTRV2 data exist.

2.   The GENDER variable is either female or male. The GENDER variable is necessary because gender specific energy value will be used as an inclusion criterion.

3.   Less than 10 blanks in our 66 food item-frequency questionnaire (DTIB01 -DTIB66).

4.   Total energy intake TCAL is between 500 and 3600 kcal for women and between 600 and 4200 kcal for men.

If a participant does not meet the above criteria and number of blanks is greater than or equal to 10, assign "NO1" to INCLUDE variable. If a participant cannot take either "YES" or "NO1" and if his or her TCAL value is outside of our acceptable TCAL range (500-3600 kcal for women and 600-4200 kcal for men), assign "NO2" to INCLUDE variable.

7 Plaque Derived Variables

7.1 BIFSHD21 (Shadowing in either carotid bifurcation)

BIFSHD21		Shadowing In Either Carotid Bifurcation
N	Value	Description
44	T	
13086	0	No shadow
826	1	Shadow
392		Missing

Value   Description
  1   Shadow
  0   No Shadow

Algorithm
1.   If [LBIFSHAD = "y"] or [RBIFSHAD = "y"]
        then set BIFSHD21 to 1.
2.   Else if [LBIFSHAD = "n"] or [RBIFSHAD = "n"]
        then set BIFSHD21 to 0.
3.   Else set BIFSHD21 to missing (.T).
LBIFSHAD: Shadowing in the left carotid bifurcation.
RBIFSHAD: Shadowing in the right carotid bifurcation.

7.2 INTSHD21 (Shadowing in either internal carotid artery)

Value   Description
  1   Shadow
  0   No Shadow

INTSHD21 is derived in a similar manner to BIFSHD21 using the following variables:

LINTSHAD: Shadowing in the left internal carotid artery.
RINTSHAD: Shadowing in the right internal carotid artery.

7.3 COMSHD21 (Shadowing in either common carotid artery)

COMSHD21		Shadowing In Either Common Carotid
N	Value	Description
19	T	
13902	0	No
35	1	Yes
392		Missing

This variable is a numeric variable which takes on the following values:

Value	Description
1	Shadow
0	No Shadow

Algorithm

1.   If [LOPTSHAD = "y"] or [ROPTSHAD = "y"]
      then set COMSHD21 to 1.

2.   Else if [LOPTSHAD = "n"] or [ROPTSHAD = "n"]
      then set COMSHD21 to 0.
3.   Else set COMSHD21 to missing (.T)

LOPTSHAD: Shadowing in the left common carotid artery measured from the optimal angle.
ROPTSHAD: Shadowing in the right common carotid artery measured from the optimal angle.

7.4   BIFPLQ21 (Plaque in either carotid bifurcation)

BIFPLQ21		Plaque In Either Carotid Bifurcation
N	Value	Description
44	T	
9870	0	No plaque
4042	1	Plaque
392		Missing

Value	Description
1	Plaque
0	No Plaque

Algorithm

1.   If [LBIFPLAQ = "y"] or [RBIFPLAQ = "y"]
      then set BIFPLQ21 to 1.
2.   Else if [LBIFPLAQ = "n"] or [RBIFPLAQ = "n"]
      then set BIFPLQ21 to 0.
3.   Else set BIFPLQ21 to missing (.T).
LBIFPLAQ: Plaque in the left carotid bifurcation.
RBIFPLAQ: Plaque in the right carotid bifurcation.

7.5 INTPLQ21 (Plaque in either internal carotid artery)

INTPLQ21		Plaque In Either Internal Carotid
N	Value	Description
164	T	
11661	0	No
2131	1	Yes
392		Missing

Value	Description
1	Plaque
0	No plaque

INTPLQ21 is derived in a similar manner to BIFPLQ21 using the following variables:

LINTPLAQ: Plaque in the left internal carotid artery.
RINTPLAQ: Plaque in the right internal carotid artery.

7.6 COMPLQ21 (Plaque in either common carotid artery)

COMPLQ21		Plaque In Either Common Carotid
N	Value	Description
19	T	
12981	0	No
956	1	Yes
392		Missing

This variable is a numeric variable which takes on the following values:

Value	Description
1	Plaque
0	No Plaque

Algorithm

1. If [LOPTPLAQ = "y"] or [ROPTPLAQ = "y"]
   then set COMPLQ21 to 1.
2. Else if [LOPTPLAQ = "n"] or [ROPTPLAQ = "n"]
   then set COMPLQ21 TO 0.
3. Else set COMPLQ21 to missing (.T).

LOPTPLAQ: Plaque in the left common carotid artery measured from the optimal angle.
ROPTPLAQ: Plaque in the right common carotid artery measured from the optimal angle.

7.7 LCOMPS21 (Plaque/shadowing (both, 1 w/o other, neither) in the left common carotid)

LCOMPS21		Plaque/Shadowing In The Left Common
N	Value	Description
375	T	
13	1	Plaque and shadowing
512	2	Plaque only
1	3	Shadowing only
13055	4	No plaque or shadow
392		Missing

This variable is a numeric variable which takes on the following values:

<u>Value</u>   <u>Description</u>
  1   Plaque and shadowing
  2   Plaque only
  3   Shadowing only
  4   No plaque or shadow

Algorithm

1.   If [LOPTSHAD = ""] or [LOPTPLAQ = ""]
         then set LCOMPS21 to missing (.T).
2.   Else if [[LOPTSHAD = "y"] and [LOPTPLAQ = "y"]]
         then set LCOMPS21 to 1.
3.   Else if [LOPTPLAQ = "y"]
         then set LCOMPS21 to 2.
4.   Else if [LOPTSHAD = "y"]
         then set LCOMPS21 to 3.
5.   Else if [LOPTSHAD = "n"] and [LOPTPLAQ = "n"]
         then set LCOMPS21 to 4.

LOPTSHAD: Shadowing in the left common carotid artery measured from the optimal angle.
LOPTPLAQ: Plaque in the left common carotid artery measured from the optimal angle.

The following are derived in a similar manner using the variables indicated:

7.8 RCOMPS21 (Plaque/shadowing (both, 1 w/o other, neither) in the right common carotid)

RCOMPS21		Plaque/Shadowing In The Right Common
N	Value	Description
286	T	
20	1	Plaque and shadowing
561	2	Plaque only
4	3	Shadowing only
13085	4	No plaque or shadow
392		Missing

Value	Description
1	Plaque and shadowing
2	Plaque only
3	Shadowing only
4	No plaque or shadow

ROPTSHAD: Shadowing in the right common carotid artery measured from the optimal angle.
ROPTPLAQ: Plaque in the right common carotid artery measured from the optimal angle.

7.9 LBIFPS21 (Plaque/shadowing (both, 1 w/o other, neither) in the left carotid bifurcation)

LBIFPS21		Plaque/Shadowing In Left Bifurcation
N	Value	Description
338	T	
460	1	Plaque and shadowing
2077	2	Plaque only
37	3	Shadowing only
11044	4	No plaque or shadow
392		Missing

Value	Description
1	Plaque and shadowing
2	Plaque only
3	Shadowing only
4	No plaque or shadow

LBIFSHAD: Shadowing in the left carotid bifurcation.
LBIFPLAQ: Plaque in the left carotid bifurcation.

7.10 RBIFPS21 (Plaque/shadowing(both,1 w/o other,neither)in the right carotid bifurcation)

RBIFPS21		Plaque/Shadowing In Right Bifurcation
N	Value	Description
274	T	
408	1	Plaque and shadowing
2246	2	Plaque only
35	3	Shadowing only
10993	4	No plaque or shadow
392		Missing

Value	Description
1	Plaque and shadowing
2	Plaque only
3	Shadowing only
4	No plaque or shadow

RBIFSHAD: Shadowing in the right carotid bifurcation.
RBIFPLAQ: Plaque in the right carotid bifurcation.

7.11 LINTPS21 (Plaque/shadowing(both,1 w/o other,neither)in the left internal carotid)

LINTPS21		Plaque/Shadowing In The Left Internal
N	Value	Description
661	T	
153	1	Plaque and shadowing
1045	2	Plaque only
5	3	Shadowing only
12092	4	No plaque or shadow
392		Missing

Value	Description
1	Plaque and shadowing
2	Plaque only
3	Shadowing only
4	No plaque or shadow

LINTSHAD: Shadowing in the left internal carotid.
LINTPLAQ: Plaque in the left internal carotid.

7.12 RINTPS21 (Plaque/shadowing(both,1 w/o other,neither)in the right internal carotid)

RINTPS21		Plaque/Shadowing In The Right Internal
N	Value	Description
764	T	
228	1	Plaque and shadowing
1115	2	Plaque only
10	3	Shadowing only
11839	4	No plaque or shadow
392		Missing

Value	Description
1	Plaque and shadowing
2	Plaque only
3	Shadowing only
4	No plaque or shadow

RINTSHAD: Shadowing in the right internal carotid.
RINTPLAQ: Plaque in the right internal carotid.

7.13 COMPS21 (Plaque/shadowing(both,1 w/o other,neither)in either common carotid)

COMPS21		Plaque/Shadowing In Either Common
N	Value	Description
19	T	
31	1	Plaque and shadowing (same side)
925	2	Plaque only
4	3	Shadowing only
12977	4	No plaque or shadow (on either side)
392		Missing

This variable is a numeric variable which takes on the following values:

Value	Description
1	Plaque and shadowing (same side)
2	Plaque only
3	Shadowing only
4	No plaque or shadow (on either side)

Algorithm
1.   If [LCOMPS21 = 1] or [RCOMPS21 = 1]
      then set COMPS21 to 1.
2.   Else if [LCOMPS21 = 2] or [RCOMPS21 =2]

then set COMPS21 to 2.
3.   Else if [LCOMPS21 = 3] or [RCOMPS21 = 3]
          then set COMPS21 to 3.
4.   Else if [LCOMPS21 = 4] or [RCOMPS21 = 4]
          then set COMPS21 to 4.
5.   Else set COMPS21 to missing (.T).

LCOMPS21: Plaque/shadowing in the left common carotid.
RCOMPS21: Plaque/shadowing in the right common carotid.

7.14 BIFPS21 (Plaque/shadowing(both,1 w/o other,neither)in either carotid bifurcation)

BIFPS21		Plaque/Shadowing In Either Bifurcation
N	Value	Description
44	T	
763	1	Plaque and shadowing (same side)
3279	2	Plaque only
54	3	Shadowing only
9816	4	No plaque or shadow (on either side)
392		Missing

Value	Description
1	Plaque and shadowing (same side)
2	Plaque only
3	Shadowing only
4	No plaque or shadow (on either side)

LBIFPS: Plaque/shadowing in the left carotid bifurcation.
RBIFPS: Plaque/shadowing in the right carotid bifurcation.

7.15 INTPS21 (Plaque/shadowing(both,1 w/o other,neither)in either internal carotid)

INTPS21		Plaque/Shadowing In Either Internal
N	Value	Description
164	T	
347	1	Plaque and shadowing (same side)
1784	2	Plaque only
15	3	Shadowing only
11646	4	No plaque or shadow (on either side)
392		Missing

Value	Description
1	Plaque and shadowing (same side)
2	Plaque only
3	Shadowing only
4	No plaque or shadow (on either side)

LINTPS21: Plaque/shadowing in the left internal carotid.
RINTPS21: Plaque/shadowing in the right internal carotid.

7.16 LPLQSD21 (Plaque/shadowing (both,1 w/o other,neither) in any left carotid site)

LPLQSD21		Plaque/Shadowing In Any Left Site
N	Value	Description
964	T	
527	1	Plaque and shadowing (any site)
2475	2	Plaque only
35	3	Shadowing only
9955	4	No plaque or shadow (at both sites)
392		Missing

This variable is a numeric variable which takes on the following values:

Value	Description
1	Plaque and shadowing (any site)
2	Plaque only
3	Shadowing only
4	No plaque or shadow (at both sites)

Algorithm
1. If [LCOMPS21 = .T] or [LBIFPS21 = .T] or [LINTPS21 = .T] then set LPLQSD21 to missing (.T).
2. Else if [LCOMPS21 = 1] or [LBIFPS21 = 1] or [LINTPS21 =1] then set LPLQSD21 to 1.
3. Else if [[LCOMPS21 = 2] or [LBIFPS21 =2] or [LINTPS21 = 2] then set LPLQSD21 to 2.
4. Else if [LCOMPS21 = 3] or [LBIFPS21 = 3] or [LINTPS21 = 3] then set LPLQSD21 to 3.
5. Else if [LCOMPS21 = 4] and [LBIFPS21 = 4] and [LINTPS21 = 4] then set LPLQSD21 to 4.

LCOMPS21:   Plaque/shadowing in the left common carotid.
LBIFPS21:   Plaque/shadowing in the left bifurcation carotid.
LINTPS21:   Plaque/shadowing in theleft internal carotid.

7.17 RPLQSD21 (Plaque/shadowing (both,1 w/o other,neither) in any right carotid site)

RPLQSD21		Plaque/Shadowing In Any Right Site
N	Value	Description
1030	T	
535	1	Plaque and shadowing (any site)
2659	2	Plaque only (any site)
31	3	Shadowing only (any site)
9701	4	No plaque or shadow (at both sites)
392		Missing

Value	Description
1	Plaque and shadowing (any site)
2	Plaque only (any site)
3	Shadowing only (any site)
4	No plaque or shadow (at both sites)

RPLQSD21 is created in a similar mannerto LPLQSD21 using the following variables:

RCOMPS21: Plaque/shadowing in the right common carotid.
RBIFPS21: Plaque/shadowing in the right bifurcation carotid.
RINTPS21: Plaque/shadowing in the right internal carotid.

7.18 PLQSHD21 (Plaque/shadowing (both,1 w/o other, neither) in any carotid site)

PLQSHD21		Plaque/Shadowing In Any Site
N	Value	Description
1793	T	
852	1	Plaque and shadowing (any site)
3507	2	Plaque only (any site)
44	3	Shadowing only (any site)
7760	4	No plaque or shadow (at both sites)
392		Missing

This variable is a numeric variable which takes on the following values:

Value	Description
1	Plaque and shadowing (any site)
2	Plaque only (any site)
3	Shadowing only (any site)
4	No plaque or shadow (at both sites)

Algorithm

1.	If [LPLQSD21 = .T] or [RPLQSD21 = .T]
	then set PLQSHD21 to missing (.T).
2.	Else if [LPLQSD21 = 1] or [RPLQSD21 =1]
	then set PLQSHD21 to 1.
3.	Else if [LPLQSD21 =2] or [RPLQSD21 = 2]
	then set PLQSHD21 to 2.
4.	Else if [LPLQSD21 = 3] or [RPLQSD21 = 3]
	then set PLQSHD21 to 3.
5.	Else if [LPLQSD21 = 4] and [RPLQSD21 = 4]
	then set PLQSHD21 to 4.
LPLQSD21:	Plaque/shadowing (both, 1 w/o other, neither) in any left carotid site.
RPLQSD21:	Plaque/shadowing (both, 1 w/o other, neither) in any right carotid site.

7.19 PLAQUE21 (Plaque (with or without shadowing) in any carotid site)

PLAQUE21		Plaque (With Or Without Shadowing)
N	Value	Description
1793	T	
7804	0	No plaque
4359	1	Plaque
392		Missing

This variable is a numeric variable which takes on the following values:

Value		Description
  1		Plaque
  0		No plaque

Algorithm
1.	If [PLQSHD21 = .T]
	then set PLAQUE21 to missing (.T).
2.	Else if [PLQSHD21 = 1] or [PLQSHD21 = 2]
	then set PLAQUE21 to 1.
3.	Else set PLAQUE21 to 0.

PLQSHD21: Plaque/shadowing (both, 1 w/o other, neither) in any carotid site.

7.20 PLAQUE23 (Plaque in any carotid site - alternative definition)

PLAQUE23		Plaque(With And W/O Shadowing)-Alt. Def.
N	Value	Description
10	T	
9137	0	No plaque
4809	1	Plaque
392		Missing

This variable is a numeric variable which takes on the following values:

Value   Description
  1   Plaque
  0   No plaque

Algorithm

1.   If [LOPTPLAQ = "y"] or [LBIFPLAQ = "y"] or [LINTPLAQ = "y"] or
      [ROPTPLAQ = "y"] or [RBIFPLAQ = "y"] or [RINTPLAQ = "y"]
      then set PLAQUE23 =1.
2.   Else if [LOPTPLAQ = "n"] or [LBIFPLAQ = "n"] or [LINTPLAQ = "n"] or
      [ROPTPLAQ = "n"] or [RBIFPLAQ = "n"] or [RINTPLAQ = "n"]
      then set PLAQUE23 =0.
3.   Else set PLAQUE23 = .T.

8 Pulmonary Derived Variables

(File PULM21)

The following pulmonary derived variables are stored in the PULM21 data set. These variables replace the variables contained in the PFTB data set and should be used in any pulmonary data analyses.

Variable	**Label**
FVC22	FVC Predicted (liters)
FEV_522	FEV(.5) Predicted (liters)
FEV_122	FEV(1) Predicted (liters)
FEV_322	FEV(3) Predicted (liters)
PEFR22	PEFR Predicted
FEF2522	FEF(25) Predicted
FEF5022	FEF(50) Predicted
FEF7522	FEF(75) Predicted
FF25752	FEF(25-75) Predicted
FEV1FVC2	FEV(1)/FVC Predicted (%)
FEV3FVC2	FEV(3)/FVC Predicted (%)

These variables were created using the gender/race specific equations listed below. For height, the variable ANTA01 was used; for age, the variable V2AGE22 was used; for race, the variable RACEGRP was used; and for gender, the variable GENDER was used.

For each variable, any missing value for age, race, height, etc. resulted in a missing value for the created variable.

Equations for White Males:

$$FVC22 = (.06*ANTA01) - (.0214*V2AGE22) - 4.65$$

$$FEV\_522 = (.0327*ANTA01) - (.0152*V2AGE22) - 1.914$$

$$FEV\_122 = (.0414*ANTA01) - (.0244*V2AGE22) - 2.19$$

$$FEV\_322 = (.0535*ANTA01) - (.0271*V2AGE22) - 3.512$$

$$PEFR22 = (.094*ANTA01) - (.035*V2AGE22) - 5.993$$

$$FEF2522 = (.088*ANTA01) - (.035*V2AGE22) - 5.618$$

$$FEF5022 = (.069*ANTA01) - (.015*V2AGE22) - 5.4$$

$$FEF7522 = (.044*ANTA01) - (.012*V2AGE22) - 4.143$$

$$FF25752 = (.0204*ANTA01) - (.038*V2AGE22) + 2.133$$

$$FEV1FVC2 = (-.13*ANTA01) - (.152*V2AGE22) + 110.49$$

$$FEV3FVC2 = (-.0627*ANTA01) - (.145*V2AGE22) + 112.09$$

Equations for Non-white Males:

The same values for the variables for nonwhite males are calculated the same as for white males less 12%:

FVC22	$= .88*((.06*ANTA01) - (.0214*V2AGE22) - 4.65)$
FEV_522	$= .88*((.0327*ANTA01) - (.0152*V2AGE22) - 1.914)$
FEV_122	$= .88*((.0414*ANTA01) - (.0244*V2AGE22) - 2.19)$
FEV_322	$= .88*((.0535*ANTA01) - (.0271*V2AGE22) - 3.512)$
PEFR22	$= .88*((.094*ANTA01) - (.035*V2AGE22) - 5.993)$
FEF2522	$= .88*((.088*ANTA01) - (.035*V2AGE22) - 5.618)$
FEF5022	$= .88*((.069*ANTA01) - (.015*V2AGE22) - 5.4)$
FEF7522	$= .88*((.044*ANTA01) - (.012V2AGE22) - 4.143)$
FF25752	$= .88*((.0204*ANTA01) - (.038*V2AGE22) + 2.133)$
FEV1FVC2	$= .88*((-.13*ANTA01) - (.152*V2AGE22) + 110.49)$
FEV3FVC2	$= .88*((-.0627*ANTA01) - (.145*V2AGE22) + 112.09)$

Equations for White Females:

FVC22	$= (.0491*ANTA01) - (.0216*V2AGE22) - 3.59$
FEV_522	$= (.0238*ANTA01) - (.0185*V2AGE22) - .809$
FEV_122	$= (.0342*ANTA01) - (.0255*V2AGE22) - 1.578$
FEV_322	$= (.0442*ANTA01) - (.0257*V2AGE22) - 2.745$
PEFR22	$= (.049*ANTA01) - (.025*V2AGE22) - .735$
FEF2522	$= (.043*ANTA01) - (.025*V2AGE22) - .132$
FEF5022	$= (.035*ANTA01) - (.013*V2AGE22) - .444$
FEF7522	$= 3.042 - (.014*V2AGE22)$
FF25752	$= (.0154*ANTA01) - (.046*V2AGE22) + 2.683$
FEV1FVC2	$= (-.202*ANTA01) - (.252*V2AGE22) + 126.58$
FEV3FVC2	$= (-.0937*ANTA01) - (.163*V2AGE22) + 118.16$

Equations for Non-white Females:

The values for the variables for nonwhite females are calculated the same as for white females less 12%:

FVC22	$= .88((.0491*ANTA01) - (.0216*V2AGE22) - 3.59)$
FEV_522	$= .88((.0238*ANTA01) - (.0185*V2AGE22) - .809)$
FEV_122	$= .88((.0342*ANTA01) - (.0255*V2AGE22) - 1.578)$
FEV_322	$= .88((.0442*ANTA01) - (.0257*V2AGE22) - 2.745)$
PEFR22	$= .88((.049*ANTA01) - (.025*V2AGE22) - .735)$
FEF2522	$= .88((.043*ANTA01) - (.025*V2AGE22) - .132)$
FEF5022	$= .88((.035*ANTA01) - (.013*V2AGE22) - .444)$
FEF7522	$= .88(3.042 - (.014*V2AGE22))$
FF25752	$= .88((.0154*ANTA01) - (.046*V2AGE22) + 2.683)$
FEV1FVC2	$= .88((-.202*ANTA01) - (.252*V2AGE22) + 126.58)$
FEV3FVC2	$= .88((-.0937*ANTA01) - (.163*V2AGE22) + 118.16)$

9   SI Unit Change

9.1   GLUSIU21 (V2 blood glucose in SI Units)

GLUSIU21		V2 Blood Glucose In mmol/L
N	Value	Description
14292	Range	1.05469 - 33.58355 (median=5.71753 mean=6.349448 std=2.442246)
56		Missing

This variable expresses blood glucose level in the System International (SI) unit system.

PRESENT SYSTEM	CONVERSION FACTOR (CF)	SI UNIT SYSTEM
mg/dL	0.05551	Mmol/L

GLUSIU21 = CHMB07 x CF

CHMB07 : Blood Glucose Level in mg/dL

9.2   TCHSIU21 (V2 Total Cholesterol in SI Units)

TCHSIU21		V2 Total Cholesterol In Mmol/L
N	Value	Description
14262	Range	2.0688 - 14.42988 (median=5.35302 mean=5.426981 std=1.022778)
86		Missing

This variable expresses total cholesterol in the System International (SI) unit system.

PRESENT SYSTEM	CONVERSION FACTOR (CF)	SI UNIT SYSTEM
mg/dL	0.02586	mmol/L

TCHSIU21 = LIPBO1A x CF

LIPBO1A : Total Cholesterol in mg/dL.

9.3   HDLSIU21 (V2 HDL Cholesterol in SI Units)

HDLSIU21		V2 HDL Cholesterol In mmol/L
N	Value	Description
14219	Range	0.1293 - 5.22372 (median=1.18956 mean=1.280127 std=0.433355)
129		Missing

This variable expresses HDL cholesterol level in the System International (SI) unit system.

PRESENT SYSTEM	CONVERSION FACTOR (CF)	SI UNIT SYSTEM
mg/dL	0.02586	mmol/L

HDLSIU21 = LIPB03A x CF

LIPBO3A: HDL Cholesterol in mg/dL

9.4 HD3SIU21 (V2 HDL (3) Cholesterol in SI Units)

HD3SIU21		V2 HDL (3) Cholesterol In mmol/L
N	Value	Description
13758	Range	0 - 2.37912 (median=0.9051 mean=0.91123 std=0.28756)
590		Missing

This variable expresses HDL (3) cholesterol level in the System International (SI) unit system.

PRESENT SYSTEM	CONVERSION FACTOR (CF)	SI UNIT SYSTEM
mg/dL	0.02586	mmol/L

HD3SIU21 = LIPB04A x CF

LIPB04A: HDL (3) Cholesterol in mg/dL

9.5 HD2SIU21 (V2 HDL (2) Cholesterol in SI Units)

HD2SIU21		V2 HDL (2) Cholesterol In mmol/L
N	Value	Description
13734	Range	0 - 3.77556 (median=0.31032 mean=0.365339 std=0.229523)
614		Missing

This variable expresses HDL (2) cholesterol level in the System International (SI) unit system.

PRESENT SYSTEM	CONVERSION FACTOR (CF)	SI UNIT SYSTEM
mg/dL	0.02586	mmol/L

HD3SIU02 = HDL221 x CF

HDL221: HDL (2) Cholesterol in mg/dL

9.6 APASIU21 (V2 Apolipoprotein AI in SI Units)

APASIU21		V2 Apolipoprotein Ai In mg/L
N	Value	Description
14073	Range	310 - 4090 (median=1260 mean=1293.8 std=311.8)
275		Missing

This variable expresses Apolipoprotein AI level in the System International (SI) unit system.

PRESENT SYSTEM	CONVERSION FACTOR (CF)	SI UNIT SYSTEM
mg/dL	10.0	mg/L

APASIU21 = RIAA01A x CF

RIAA01A : Apolipoprotein AI in mg/dL

9.7 APBSIU21 (V2 Apolipoprotein B in SI Units)

APBSIU21		V2 Apolipoprotein B In mg/L
N	Value	Description
14092	Range	0 - 3360 (median=920 mean=956.2 std=285.0)
256		Missing

This variable expresses Apolipoprotein B level in the System International (SI) unit system.

PRESENT SYSTEM	CONVERSION FACTOR (CF)	SI UNIT SYSTEM
mg/dL	10.0	mg/L

APBSIU21 = RIAA02A x CF

RIAA02A: Apolipoprotein B in mg/dL

9.8 LDLSIU22 (V2 Recalculated LDL Cholesterol in SI Units)

LDLSIU22		V2 LDL Cholesterol In mmol/L
N	Value	Description
14007	Range	0 - 12.086964 (median=3.392832 mean=3.4522965 std=0.9528608)
341		Missing

This variable expresses LDL cholesterol level in the System International (SI) unit system.

PRESENT SYSTEM	CONVERSION FACTOR (CF)	SI UNIT SYSTEM
mg/dL	0.02586	mmol/L

LDLSIU22 = LDL22 x CF

LDL22: LDL re-calculated Cholesterol in mg/dL

9.9   TRGSIU21 (V2 Triglycerides in SI Units)

TRGSIU21		V2 Total Triglycerides In lmol/L
N	Value	Description
14260	Range	0.12419 - 26.82504 (median=1.28706 mean=1.533636 std=1.016267)
88		Missing

This variable expresses Total Triglycerides in the System International (SI) unit system.

PRESENT SYSTEM	CONVERSION FACTOR (CF)	SI UNIT SYSTEM
mg/dL	0.01129	mmol/L

TRGSIU21 = LIPB02A x CF

LIPB02A : Total Triglycerides in mg/dL

10.1 CIGT21 (V2 Cigarette smoking status)

CIGT21		V2 Cigarette Smoking Status
N	Value	Description
3209	1	Current smoker
5420	2	Former smoker
5686	3	Never smoker
33		Missing

This is a numeric variable which assumes the following values according to the table below:

Value	Description
1	Current smoker
2	Former smoker
3	Never smoker
4	Unknown, but one of the above three categories may be ruled out.

Missing No responses or contradictory answers.

Note: This variable includes a historical component, but no use of Visit 1 data has been made.

Table of assignment of values to CIGT21

HHX Q44: HAVE YOU EVER SMOKED CIGARETTES?	HHX Q45: DO YOU NOW SMOKE CIGARETTES?		
	Y	N	Missing
Y	1	2	4 (d)
N	Missing (a)	3	3
Missing	1 (b)	4 (c)	Missing

Footnotes to the table:

(a)   Bad data (contradictory answers)
(b)   Even though Q44 is not answered, Q45 defines the person as a current smoker
(c)   Could be either former or never smoker
(d)   Could be either former or current smoker

10.2 CURSMK21 (Current cigarette smoker)

CURSMK21		*Current Smoker Flag*
N	*Value*	*Description*
33	T	
11106	0	No
3209	1	Yes

CURSMK21 is a categorical variable that takes values according to the definition table below:

CURSMK21	HHXB44	HHXB45
1	Y or Missing	Y
	N	Not Y
0	Y or Missing	N
	N	Y
T	not N	Missing

HHXB44:   Have you ever smoked cigarettes? Yes, No
HHXB45:   Do you now smoke cigarettes? Yes, No

10.3 FORSMK21 (Former cigarette smoker)

FORSMK21		*Former Smoker Flag*
N	*Value*	*Description*
33	T	
8895	0	No
5420	1	Yes

FORSMK21 is a categorical variable that takes values according to the definition table below:

FORSMK21	HHXB44	HHXB45
1	Y	N
	N	N or Missing
0	Y or Missing	Y
	N	Y
	Y	Missing
T	Missing	Missing or N

HHXB44:   Have you ever smoked cigarettes? Yes, No
HHXB45:   Do you now smoke cigarettes? Yes, No

10.4 EVRSMK21 (Ever smoked cigarettes)

EVRSMK21		Ever Smoker Flag
N	Value	Description
33	T	
5686	0	No
8629	1	Yes

EVRSMK21 is a categorical variable that takes values according to the definition table below:

EVRSMK21	HHXB44	HHXB45
	Y	any
1	Missing	Y
0	N	not Y
	N	Y
T	Missing	not Y

HHXB44:   Have you ever smoked cigarettes? Yes, No
HHXB45:   Do you now smoke cigarettes? Yes, No

11 Other Variables

11.1 V2DATE21 (Visit 2 Date)

V2DATE21		Visit 2 Date
N	Value	Description
14348	Range	10993 - 12127 (median=11522 mean=11520.5 std=301.8)

Search the Visit 2 dates on Visit 2 forms in the following order:

FTRB01, SBPB23, ANTB06

V2DATE21 is the first non-missing date that is found.

Notes:

a.   V2DATE21 = FTRB01 for all persons

b.   Consistency checks among the dates are not performed.

11.2 V2AGE22 (Age at Visit 2)

V2AGE22		Age At Visit 2
N	Value	Description
14348	Range	46 - 70 (median=57 mean=57.0 std=5.7)

V2AGE22 is calculated as the difference in years between BIRTHDAT (Birth date) and V2DATE21 (Derived Visit 2 date).

i.   Birthday is prior to the visit 2 day:

     a.   (birth month) < (month of visit)

     b.   (birth month) = (month of visit) and
     (birth day) $\leq$ (day of visit)

     V2AGE22 = (year of visit) - (birth year)

ii.   Birthday is on or after the visit 2 day:

     a.   (birth month) > (month of visit)

     b.   (birth month) = (month of visit) and
     (birth day) > (day of visit)

       V2AGE22 = (year of visit) - (birth year) - 1

        iii.   Any of the following cannot be determined:

               a.   Relationship between birthday and visit 2 day.

               b.   Year of visit.

               c.   Birth year.

            V2AGE22 = missing.

      Notes:

               a.   Birth month, day, and year are determined from BIRTHDAT for birth date.

               b.   Visit month, day, and year are determined from the derived variable, V2DATE21, for visit date.

V2AGE22 has been created using the uncorrected birth date (BIRTHDAT in DERIVE26), and V2CORAGE has been created using the corrected birth date (CORBIRT1 in UNOFF23). Since many analyses were already done using the uncorrected variable, the Executive Committee has recommended to use the uncorrected age variable (V2AGE22) for Visit 2 and longitudinal analyses. The corrected version could be used for cross-sectional analyses.

11.3 FAST0823 (8 Hours or More of Fasting Time)

FAST0823		V2 Fast 8 Hrs Or More, Definition 2
N	Value	Description
42	T	Missing (fasting status cannot be determined)
447	0	No
13859	1	Yes

This is a categorical variable that takes on the values of:

0   Not fasting 8 hours or more
1   Fasting 8 hours or more
.T   Missing (fasting status cannot be determined)

Definition:

If either the FTRB or VENB form (or both) is missing or either form has a missing date (FTRB02 or VENB02 = missing), then

A.   Set FAST0823 to missing.

If both dates are present and equal (FTRB02 = VENB02), then

A.   Compute CLINTIME, the time between the FTRB interview time (FTRB03A) and venipuncture time (VENB03). Convert FTRB interview time and/or venipuncture time to a 24-hour clock value if the hour value (FTRB03AH, VENB03H) falls in the range 1-11 and the time of day (FTRB04C, VENB03A) is PM. Do this by adding 12 to the hour value.

B.   If time of consumption of last meal is "before yesterday" (FTRB04A = B) or the total time between consumption of last meal and blood draw is $\geq$ 8 hours, then set FAST0823 to 1 if blood draw is before consumption of the snack (VENB04 = Y or blank).

C.   If the snack was consumed before blood draw (VENB04 = N) or the total time between consumption of last meal and blood draw is not missing and < 8 hours, then set FAST0823 to 0.

D.   If neither B nor C above is met, set FAST0823 to missing if either FRTA05 or CLINTIME is missing.

If both dates are present and FTRB visit occurred before VENB visit (FTRB02 < VENB02) then

A.   In this case, the clinic is assumed to have changed the fasting information, so that FTRB04A and FTRB05 refer to the VENB visit day. Assign a value of 1 to FAST0823 if FTRB05 $\geq$ 8; assign a value of 0 if FTRB03 is nonmissing and < 8.

If both dates are present and FTRB visit occurred after VENB visit (FTRB02 > VENB02) then

A.   Set FAST0823 to missing.

| CLINTIME | : | A temporary variable to determine the total elapsed times since the participant provided their fasting information and when venipuncture was performed. |

FTRB01	:	Date of visit in mmddyy.
FTRB02	:	Date of fasting determination.
FTRB03AH	:	Time of visit hour component.
FTRB03AM	:	Time of visit minute component.
FTRB04C	:	Time of visit: AM or PM.
FTRB04A	:	Day last consumed.
		T (Today), Y (Yesterday), B (Before yesterday)
FTRB05	:	Computed fasting time in hours.
VENB02	:	Date of blood drawing in mmddyy.
VENB03A	:	Time of blood drawing: AM or PM.
VENB03H	:	Time of blood drawing hour component.
VENBO3M	:	Time of blood drawing minute component.
VENB04	:	Was blood drawn before the snack? Y, N

11.4 FAST1223 (12 Hours or more of Fasting Time)

FAST1223	V2 Fast 12 Hrs Or More, Definition 2	
N	Value	Description
44	T	Missing (fasting status cannot be determined)
848	0	No
13456	1	Yes

This is a categorical variable that takes on the values of:

0	Not fasting 12 hours or more
1	Fasting 12 hours or more
.T	Missing (fasting status cannot be determined)

Definition:

If either the FTRB or VENB form (or both) is missing or either form has a missing date (FTRB01A or VENB02 = missing), then

A.   Set FAST1223 to missing.

If both dates are present and equal (FTRB02 = VENB02) then

A.   Compute CLINTIME, the time between the FTRB interview time (FTRB03A) and venipuncture time (VENB03). Convert FTRB interview time and/or venipuncture time to a 24-hour clock value if the hour value (FTRB03AH, VENB03H) falls in the range 1-11 and the time of day (FTRB04C, VENB03A) is PM. Do this by adding 12 to the hour value.

B.   If time of consumption of last meal is "before yesterday" (FTRB04A = B) or the total time between consumption of last meal and blood draw is $\geq$ 12 hours, then set FAST1223 to 1 if blood draw is before consumption of the snack (VENB04 = Y or blank).

C.   If the snack was consumed before blood draw (VENB04 = N) or the total time between consumption of last meal and blood draw is not missing and < 12 hours, then set FAST1223 to 0.

D.   If neither B or C above is met, set FAST1223 to missing if either FTRB05 or CLINTIME is missing.

If both dates are present and FTRB visit occurred before VENB visit (FTRB02 < VENB02) then

A.   In this case, the clinic is assumed to have changed the fasting information, so that FTRB02 and FTRB05 refer to the VENB visit day. Assign a value of 1 to FAST1223 if FTRB05 $\geq$ 12; assign a value of 0 if FTRB05 is nonmissing and < 12.

If both dates are present and FTRB visit occurred after VENB visit (FTRB02 > VENB02) then

A.   Set FAST1223 to missing.

CLINTIME	:	A temporary variable to determine the total elapsed time since the participant provided their fasting information and when venipuncture was performed.
FTRB01	:	Date of visit in mmddyy.
FTRB02	:	Date of fasting determination.
FTRB03AH	:	Time of visit hour component.
FTRB03AM	:	Time of minute component.
FTRB04C	:	Time of visit: AM or PM.
FTRB04A	:	Day last consumed. T (Today), Y (Yesterday), B (Before yesterday).

FTRB05   :   Computed fasting time in hours.

VENB02   :   Date of blood drawing in mmddyy.

VENB03A   :   Time of blood drawing: AM or PM.

VENB03H   :   Time of blood drawing hour component.

VENB03M   :   Time of blood drawing minute component.

VENB04   :   Was blood drawn before the snack? Y, N

11.5 TGLEFH21 (Triglycerides less than or equal to 400 mg/dL)

TGLEFH21		Triglycerides Under 400
N	Value	Description
209	0	No
14051	1	Yes
88		Missing

This is a numeric Visit 2 variable which assumes the following values according to the table below.

Value	Description
1	Triglycerides under 400 mg/dL = Yes.
0	Triglycerides under 400 mg/dL = No.

Table of assignment of values to TGLEFH21

	LIPB02A (MG/DL)
TGLEFH21 = 1	Not missing and Less than or equal to 400
TGLEFH21 = 0	More than 400
TGLEFH21 = missing	Missing

LIPB02A: Total Triglycerides (mg/dL).

11.6 MENOPS21 (Menopausal Status)

MENOPS21		Menopause Status Variable For Visit 2
N	Value	Description
11	T	Special Missing
4	1	Primary Amenorrhea
799	2	Premenopause
665	3	Perimenopause
4331	4	Post Natural
1313	5	Post Surgical
739	6	Unknown Ovarian
15	7	Post Radiation
20	8	Post Unknown
6451		Missing

MENOPS21 is a categorical variable that takes on the values 1 through 8 as follows:

1=Primary Amenorrhea
2=Premenopause
3=Perimenopause
4=Post Natural
5=Post Surgical
6=Unknown Ovarian
7=Post Radiation
8=Post Unknown
.T=Special Missing
.=missing

Values are assigned according to the conditions defined below:
[Note: MENOPS02 is menopausal status at Visit 1]

1.   If {MENOPS02=1}
        then set MENOPS21=1   (Primary Amenorrhea)

2.   If the above condition is not met and the following condition is met
        then set MENOPS21=2 (Premenopause)

        If {hhxb15=Yes and hhxb42 Both and (hhxb18=No or (hhxb17=0 and hhxb18=missing))}

3.   If none of the above conditions are met and the following condition is met
        then set MENOPS21=.T (Special Missing)

        If {hhxb15=Yes and hhxb42=Both and (hhxb18=No or (hhxb17=0 and hhxb18=missing))}

4.   If none of the above conditions are met and the following condition is met

then set MENOPS21=3 (Perimenopause)

If { hhxb15=Yes and ((hhxb18=Yes or hhxb18=Unknown) or (hhxb18=missing and hhxb42=Both))}

5.　　　If none of the above conditions are met and at least one of the following conditions is met then set MENOPS21=4 (Post Natural)

If {menops02=4 and rhxa48　Both)

or
{menops02=4 and rhxa48=Both and rhxa49 > .Z and rhxa08 > .Z and rhxa49 > rhxa08}

or
{hhxb15=No and (hhxb20=Natural or hhxb20=Unknown) }

or
{hhxb15=No and ((hhxb20=Surgery or hhxb20=Missing) and hhxb39=No)}

or
{hhxb15=Missing and (hhxb18=Yes or hhxb20=Natural and hhxb39=No)}

or
{hhxb15=No and (hhxb20=Missing or hhxb20=Surgery) and hhxb42=No and v2age21 >= 55}

or
{menops02=6 and v1age01 >= 55 and rhxa48　Unknown and hhxb42　Unknown)}

or
{menops02=6 and v2age21 >= 55 and rhxa48　Unknown and hhxb42　Unknown)}

or
{rhxa04=Yes and rhxa07=Yes and rhxa09=Natural and [rhxa45=No or (rhxa45=Yes and

rhxa48=One)] and (hhxb14=missing or hhxb14=No) and (hhxb37=No or hhxb37=missing or

hhxb37=Yes) and (hhxb39=No or hhxb39=missing) and hhxb15=missing }

6.　　　If none of the above conditions are met and at least one of the following conditions is met then set MENOPS21=5 (Post Surgical)

If {menops02=5}

or
{menops02=4 and rhxa48=Both and rhxa49 <= rhxa08 and rhxa49 > .Z and rhxa08 > .Z}

or
{hhxb15=No and (hhxb20=Surgery or hhxb20=missing) and hhxb42=Both}

or
{menops02=3 and ((rhxa48=Both and hhxb15"Yes) or (hhxb42=Both and hxb20 "Natural and hhxb15"Yes)) }

7.　　　If none of the above conditions are met and at least one of the following conditions is met then set MENOPS21=6 (Unknown Ovarian)

If {menops02=6 and hhxb14=No and 44 <= v2age21 < 55}

or

{hhxb15=No and hhxb18=Yes and hhxb20=Surgery and hhxb39=Yes and hhxb40=No and hhxb42=One}

or
{hhxb15=No and (hhxb20=Surgery or hhxb20=missing) and hhxb42=Unknown}

or
{hhxb15=No and hhxb18=Yes and hhxb20=Surgery and (hhxb39=Yes or hhxb39=Unknown) and (hhxb42=missing or hhxb42=Both or hhxb42=Surgery) }

or
{hhxb15=No and hhxb18=Uknown and hhxb20=missing and hhxb39=Yes and hhxb40=Yes and hhxb42=missing}

or
{hhxb40=Yes and hhxb42 Both and (hhxb19 hhxb41) and hhxb19 > .Z and hhxb41 < .Z and hhxb20 Natural}

or
{hhxb15=No and (hhxb20=Surgery or hhxb20=missing) and (hhxb42=No or hhxb42=One) and 44 <= v2age21 < 55}

or
{menops02=6 and rhxa48=Unknown and v2age21 >= 55}

or
{menops02=3 and rhxa04=Yes and rhxa07=Yes and rhxa09=Surgery and rhxa45=Yes and rhxa46=Yes and rhxa48=No and hhxb14=Yes and hhxb15=No and hhxb16=missing and hhxb18=Yes and hhxb20=Surgery and (hhxb37=Yes or hhxb37=missing) and hhxb39=missing and hhxb40=missing and hhxb42=missing}

8.   If none of the above conditions are met and the following condition is met
      then set MENOPS21=7 (Post Radiation)

      If menops02 = 7 or {hhxb15=No and hhxb20=Radiation and rhxa09 Natural}

9.   If none of the above conditions are met and at least one of the following conditions is met
      then set MENOPS21=8 (Post Unknown)

      If {(menops02=2 or menops02=3) and ((rhxa07=Yes and rhxa09=Natural and rhxa48=Both and rhxa45=Yes) or (rhxa07=Yes and rhxa09=Surgery and rhxa48"Both) or (hhxb18=Yes and hhxb20=Surgery and hhxb42"Both))}

10.   If none of the above conditions are met and the following condition is met
      then set MENOPS21=6 (Unknown Ovarian)

      {menops02=6 and rhxa04=No and rhxa07=Yes and rhxa09=Surgery and rhxa45=Yes and rhxa46=Yes and rhxa48=No and hhxb14=missing and hhxb15=missing and hhxb16=missing and hhxb18=missing}

11.   If none of the above conditions are met and the following condition is met
      then set MENOPS21=6

      {menops02=2 and rhxa04=Yes and rhxa07=missing and rhxa09=missing and rhxa45=Yes and rhxa46=Yes and rhxa48=No and hhxb14=Yes and hhxb15=No and hhxb16=missing and hhxb18=No and hhxb20=missing and hhxb37=Yes and hhxb39=missing and hhxb40=missing and hhxb42=missing}

12.   If none of the above conditions are met
      then set MENOPS21=missing

RHXA01: Approximately how old were you when your menstrual periods started?
RHXA04: Have you had any menstrual periods during the past two years?
RHXA06: In the past 2 years how many periods did you miss?
RHXA07: Have you reached menopause? Y,N,U (Unknown)
RHXA08:
RHXA09: Was your menopause natural or the result of surgery or radiation?
       N(Natural), S (Surgery), R (Radiation), U (Unknown)
RHXA45: Have you had surgery to have your uterus or ovaries removed? Y, N, U (Unknown)
RHXA46: Was your uterus (womb) removed? Y, N, U (Uknown)
RHXA47: How old were you when this operation was performed? (Refers to RHXA46)

RHXA48: Have you had either one or both ovaries removed?
       O (Yes, One), B (Yes, Both), N (No), U (Uknown)
RHXA49: How old were you when this operation was performed? (Refers to RHXA48)

HHXB14: Did the participant have menstrual periods within 2 years prior to Visit 2? Y, N, U   (Unknown)
HHXB15: Have you had any menstrual periods during the last 2 years? Y, N, U (Unknown)

HHXB16: In what month and year was your last menstrual period?
HHXB17: In the past 2 years how many periods did you miss?
HHXB18: Have you reached menopause? Y, N, U (Unknown)
HHXB19: At approximately what age did menopause begin?
HHXB20: Was your menopause natural or the result of surgery or radiation?
       N(Natural), S (Surgery), R (Radiation), U (Unknown)
HHXB37: Did the participant have a partial or total hysterectomy or oophorectomy at the time   of Visit 2?
Y, N, U (Unknown)
HHXB39: Have you had surgery to have your uterus or ovaries removed? Y, N, U (Unknown)
HHXB40: Has your uterus (womb) been removed? Y, N, U (Unknown)
HHXB41: How old were you when this operation was performed? (Refers to HHXB40)
HHXB42: Have you had either one or both ovaries removed?
       O (Yes, One), B (Yes, Both), N (No), U (Unknown)

11.7 BIRTHDAT (Date of Birth)

Birthdat comes from Derive2_10 file.

BIRTHDAT		Date Of Birth Of Subject Q11
N	Value	Description
14348	Range	02/25/1920 - 03/17/1945

11.8 HORMON22 (Use of Hormones, Female Participants) (UC2188)

HORMON22		V2 Hormone Use
N	Value	Description
1353	1	Current Estrogen User
633	2	Current Estrogen and Progestin User
4330	3	Never Used Hormones
342	4	Former Hormone User or Former User of other medications reported by participants as hormones
7690		Missing

This is a numeric, categorical variable that can take the values 1 through 4 as follows:

> 1 = Current Estrogen User
> 2 = Current Estrogen adn Progestin User
> 3 = Never Used Hormones
> 4 = Former Hormone User or Former User of other medications
>   reported by participants as hormones[*]
> . = Missing

[*]This group reported hormone codes which had been taken since the last exam to the HHXB (Health History Form), but some of the hormone codes reported by participants as hormones failed to be classified into one of the following hormones: Estrogen, Progest, Oral Cont, Estcrm, Androg, Estrandr, and Unkgonad. Note that this group is defined as former hormone users who possibly misunderstood non-hormones as hormones. We don't highly recommend use of this group.

Table of Assignment of Values to HORMON22

HORMON22 =	1	IF CURR2 = 1 THEN HORMON22 = 1;
=	2	if CURR2 = 2 then HORMON22 = 2;
=	3	if HORMTIM2 = 3 then HORMON22 = 3;

=	4	if HORMTIM2 = 4 & ((ESTROGE2 = 'Y' or PROGEST2 = 'Y' or
		   ORALCON2 = 'Y' OR ESTRCRM2 = 'Y' OR ANDROG2 = 'Y' or
		   ESTRAND2 = 'Y' or UNKGONA2 = 'Y' or OTHER2='Y'))
		 then HORMON22 = 4;

=	.	else HORMON22 = . ;

For men this variable is automatically set to missing.
Values of HORMON22 are assigned according to the values of intermediate variables. The creating logic for each intermediate variable is described below. In some instances, variables from Visit 1 are used.

The following intermediate variables designate use of hormones based on the Visit 2 HHXB dataset. The logic follows that of HORMON02 for Visit 1, except that Visit 2 data are used. Each variable can take values of 'Y' = yes or 'N'= no. For each hormone, there are two variables: one designates whether it was ever used; the other designates whether it is currently being used. Two variables from Visit 1 are included here: ORALCON1 and CORALCO1; they are used in determination of ORALTIM2.

Variable	Description

Variables to designate "ever used":

ESTROGE2	'Estrogen at v2'
PROGEST2	'Progest at v2'
ORALCON1	'Oral Cont at v1'
ORALCON2	'Oral Cont at v2'
ESTRCRM2	'Estrcrm at v2'
ANDROG2	'Androg at v2'
ESTRAND2	'Estrandr at v2'
UNKGONA2	'Unkgonad at v2'
OTHER2	'Other at v2'

Variables to designate "current use":

CESTROG2	'Current Estrogen Use at v2'
CPROGES2	'Current Progest Use at v2'
CORALCO1	'Current Oral Cont Use at v1'
CORALCO2	'Current Oral Cont Use at v2'
CESTRCR2	'Current Estrcrm Use at v2'
CANDROG2	'Current Androg Use at v2'
CESTRAN2	'Current Estrand Use at v2'
CUNKGON2	'Current Unkgonad Use at v2'
COTHER2	'Current Other Use at v2';

The following table shows the MTC codes and labels for the preceding intervening variables. The MTC code is equivalent to the first six digits of the GPI code. MTC labels are from the Medispan Master Drug Data Base, Appendix E, Therapeutic Classification System.

INTERVENING VARIABLE	VARIABLE LABEL	MTC CODE	MTC LABEL
ESTROGE2	'Estrogen at v2'	240000	Estrogens
		249920	Estrogen & Antianxiety Agent
PROGEST2	'Progest at v2'	260000	Progestins
ORALCON2, ORALCON1	'Oral Cont at v2' 'Oral Cont at V1'	250000	Contraceptives, Oral
		259900	Combinations, OC's
		259920	Triphasic OC's
ESTRCRM2	'Estrcrm at v2'	553500	Vaginal Estrogens
ANDROG2	'Androg at v2'	231000	Androgens
ESTRAND2	'Estrandr at v2'	249910	Estrogen & Androgen
UNKGONA2	'Unkgonad at v2'	300000	Miscellaneous Endocrine
OTHER2	'Other at v2'	other	

The MTC values for the variables designating <u>current</u> use of hormones are, of course, identical.

The table on the following page presents the algorithm for a value of 'Y' (yes) for each of the intervening variables listed above.

Variable Name	Condition(s) for Variable = 'Y'
ESTROGE2	If hormone code 1 [HHX24] or hormone code 2 [HHX31] maps to MTC 240000, 249920
PROGEST2	Else if hormone code 1 [HHX24] or hormone code 2 [HHX31] maps to MTC 260000
ORALCON2	Else if hormone code 1 [HHX24] or hormone code 2 [HHX31] maps to MTC 250000, 259900, 259920
ESTRCRM2	Else if hormone code 1 [HHX24] or hormone code 2 [HHX31] maps to MTC 553500
ANDROG2	Else if hormone code 1 [HHX24] or hormone code 2 [HHX31] maps to MTC 231000
ESTRAND2	Else if hormone code 1 [HHX24] or hormone code 2 [HHX31] maps to MTC 249910
UNKGONA2	Else if hormone code 1 [HHX24] or hormone code 2 [HHX31] maps to MTC 300000
OTHER2	Else if hormone code 1 [HHX24] or hormone code 2 [HHX31] not blank
CESTROG2	(If hormone code 1 [HHX24] = ESTROGE2 & current use [HHXB26] = 'Y') or (hormone code 2 [HHX31] maps to ESTROGE2 & current use [HHXB33] = 'Y')
CPROGES2	(Else if hormone code 1 [HHX24] = PROGEST2 & current use [HHXB26] = 'Y') or (hormone code 2 [HHX31] = PROGEST2 & current use [HHXB33] = 'Y')
CORALCO2	(Else if hormone code 1 [HHX24] = ORALCON2 & current use [HHXB26] = 'Y') or (hormone code 2 [HHX31] = ORALCON2 & current use [HHXB33] = 'Y')
CESTRCR2	(Else if hormone code 1 [HHX24] = ESTRCRM2 & current use [HHXB26] = 'Y') or (hormone code 2 [HHX31] = ESTRCRM2 & current use [HHXB33] = 'Y')
CANDROG2	(Else if hormone code 1 [HHX24] =ANDROG2 & current use [HHXB26] = 'Y') or (hormone code 2 [HHX31] = ANDROG2 & current use [HHXB33] = 'Y')
CESTRAN2	(Else if hormone code 1 [HHX24] = ESTRAND2 & current use [HHXB26] = 'Y') or (hormone code 2 [HHX31] = ESTRAND2 & current use [HHXB33] = 'Y')
CUNKGON2	(Else if hormone code 1 [HHX24] = UNKGONA2 & current use [HHXB26] = 'Y') or (hormone code 2 [HHX31] = UNKGONA2 & current use [HHXB33] = 'Y')
COTHER2	(Else if hormone code 1 [HHX24] = OTHER2 & current use [HHXB26] = 'Y') or (hormone code 2 [HHX31] = OTHER2 & current use [HHXB33] = 'Y')
The following two Visit 1 intervening vars. are used in computing ORALTIM2	
ORALCON1	If hormone code 1 [RHXA17] or code 2 [RHXA24] or code 3 [RHXA31] or code 4 [RHXA38] map to MTC 250000, 259900, 259920
CORALCO1	If ORALCON1 = 'Y' and associated "Current Use" variable [RHXA20, RHXA27, RHXA34, RHXA41] = 'Y'

The intermediate variables CURR2, HORMTIM2, and ORALTIM2 are used directly to determine HORMON22.

They are created by using values from the hormone use variables that are described above. The possible values and algorithms for these variables are given below:

CURR2   Checks for current use of specific hormones:
                                   1 = Current estrogen user only.
                                   2 = Current estrogen and progestin user.
                                   3 = User of other hormones or other medications reported by participants
                                   as hormones (oral contraceptives, estrogen creams, androgens
                                   4 = All other participants.

The values for CURR2 are determined based on Visit 2 intermediate variables that are equivalent to Visit 1 intermediate variables. Logic is parallels that used to create CURRUSE for HORMON02 (Visit 1).

Table of Assignment of Values to CURR2

CURR2 =	1	IF (ESTROGE2 = 'Y' & CESTROG2 = 'Y') & (CPROGES2 = 'N' & CORALCO2 = 'N' & CESTRCR2 = 'N' & CANDROG2 = 'N' & CESTRAN2 = 'N' & CUNKGON2 = 'N' & COTHER2 = 'N') THEN CURR2 = 1;
=	2	if (ESTROGE2 = 'Y' & CESTROG2 = 'Y' & PROGEST2 = 'Y' & CPROGES2 = 'Y') & (CORALCO2 = 'N' & CESTRCR2 = 'N' & CANDROG2 = 'N' & CESTRAN2 = 'N' & CUNKGON2 = 'N' & COTHER2 = 'N') then CURR2 = 2;
=	3	if (ESTROGE2 = "N" or CESTROG2 = "N") & ((ORALCON2 = 'Y' & CORALCO2 = 'Y') or (ESTRCRM2 = 'Y' & CESTRCR2 = 'Y') or (PROGEST2 = 'Y' & CPROGES2 = 'Y') or (ANDROG2 = 'Y' & CANDROG2 = 'Y') or (ESTRAND2='Y' & CESTRAN2 = 'Y') or (UNKGONA2 = 'Y' & CUNKGON2 = 'Y') or (OTHER2='Y' & COTHER2='Y')) then CURR2 = 3;
=	4	else CURR2=4;

HORMTIM2   Checks for current, past, never use of hormones.
                                   This is a numeric variable which assumes values according to the table below. It uses datasets from both Visit 1 and Visit 2.

                                   1 = Unknown
                                   2 = Currently taking hormones.
                                   3 = Never took hormones.
                                   4 = Former hormone user or Former user of other
medications reported by participants as hormones.
                                   . = Missing value.

*Table of assignment of values to HORMTIM2

HORMTIM2 =	1	IF RHXA16 = 'U' OR RHXA16 = ' ' OR HHXB22 = ' ' OR HHXB22 = 'U'
=	2	if HHXB22='Y' & ((HHXB26='Y' and HHX24 ne ' ') or (HHXB33='Y' and HHX31 ne ' '))
=	3	if (RHXA16 ='N' or HORMTIM1 = 3) and HHXB22='N'
=	4	if (HORMTIM1 = 2 and HHXB22 = 'N') or ((HHXB22 = 'Y' and HHXB26 = 'N') and (HHXB33 = 'N' or HHXB33 = ' ')) or ((ESTROGE2 ='Y'and CESTROG2 = 'N') or (PROGEST2 = 'Y' and CPROGES2='N') or (ORALCON2 ='Y' and CORALCO2='N') or (ESTRCRM2 ='Y' and CESTRCR2='N') or (ANDROG2 ='Y' and CANDROG2='N') or (ESTRAND2 ='Y' and CESTRAN2='N') or (UNKGONA2 ='Y' and CUNKGON2='N') or (OTHER2 ='Y' and COTHER2 ='N'))

Note: HORMTIM2 = 1 has been modified from the original version of algorithm by adding "or HHXB22 = 'U'".

ORALTIM2   Checks for current, past, never use of oral birth control. This is a numeric variable which assumes values according to the table below. It uses datasets from both Visit 1 and Visit 2.

              1 = Never took oral contraceptives
              2 = Currently taking oral contraceptives
              3 = Past user of oral contraceptives
              4 = Unknown

   Table of Assignment of Values to ORALTIM2

ORALTIM2 =	1	IF ORALCON2='N' & ORALCON1='N' THEN ORALTIM2=1;
=	2	if (ORALCON2 = 'Y' & CORALCO2 = 'Y') then ORALTIM2 = 2;
=	3	if (ORALCON1 = 'Y' & (ORALCON2 = 'N' or CORALCO2 = 'N' or CORALCO1 = 'N')) or (ORALCON2 = 'Y' & CORALCO2 = 'N') then ORALTIM2 = 3;
=	4	if ORALCON1 = 'N' and (RHXA11 ne 'Y' and RHXA11 ne 'N') then ORALTIM2 = 4;

The intervening variable HORMTIM1, the Visit 1 version of HORMTIM2, is used in deriving HORMTIM2. The algorithm for HORMTIM1 follows:

              1 = Unknown
              2 = Currently taking hormones.
              3 = Never took hormones.
              4 = Former hormone user
              . = Missing value.

Table of Assignment of Values to HORMTIM1

HORMTIM1 =	1	IF (RHXA16 = 'U' OR RHXA16 = ' ')	
=	2	if RHXA16='Y' & ((RHXA20='Y' and RHXA17 ne ' ') or	(RHXA27='Y' and RHXA24 ne ' ')
		or (RHXA34='Y' and RHXA31 ne ' ') or	(RHXA41='Y' and RHXA38 ne ' '))
=	3	if RHXA16 ='N'	
=	4	if RHXA16 = >Y= and (RHXA20 = 'N') and (RHXA27 = N or >=) and (RHXA34 = >N= or >=) and (RHXA41 =N or>=)	

The table below lists the datasets and variables that are used to create HORMON22.

DATASETS AND VARIABLES USED TO CREATE HORMON22

SUBDIR\DATASET Variable	Variable Label
V1FINAL\RHXA	
RHXA11	EVER taken birth control pills
RHXA16	EVER taken female hormones
RHXA17	Female Hormone 1
RHXA20	Currently taking Hormone 1
RHXA24	Female Hormone 2
RHXA27	Currently taking Hormone 2
RHXA31	Female Hormone 3
RHXA34	Currently taking Hormone 3
RHXA38	Female Hormone 4
RHXA41	Currently taking Hormone 4
V2FINAL\HHXB	
HHXB22	Use Hormone since last Visit
HHXB31	Hormone 2 Code
HHXB26	Currently Taking Hormone 1
HHXB31	Hormone 2 Code
HHXB33	Currently Taking Hormone 2
V2FINAL\HHXCOD21	
HHX24	Hormone 1 Code
HHX31	Hormone 2 Code

NOTES: HORMON22 was created by request from Aaron Folsom. The SAS code, algorithm, and output were reconciled with versions created by Sue Winkhart, which were sent to the CC along with the request.

The algorithms have been modified by the addition of "or HHXB22 = 'U'" to logic that creates HORMTIM2 = 1 (see above).

11.9 GENDER (Sex)

GENDER		Sex (From FTRA22)
N	Value	Description
7944	F	Female
6404	M	Male

During the closure of the AFU Medical History Data, it came to our attention that there are two ARIC Ids with gender incorrectly identified in our consolidated database. Both Ids (J252435 & J327948) involve female participants who were incorrectly identified as male in our database. The uncorrected gender variable (GENDER) stays in DERIVE26 and the corrected gender variable (CORGEND1) stays in UNOFF23. Since many analyses were already done using the UNCORRECTED gender variable, the Executive Committee has recommended to use the uncorrected gender variable (GENDER) for Visit 1 and longitudinal analyses. The corrected version could be used for cross-sectional analyses other than Visit 1.

11.10   RACEGRP (Race)

RACEGRP		Race (From FTRA23)
N	Value	Description
32	A	
3577	B	Black
10	I	
10729	W	White

While we have been tracking all known errors, we found there are two Ids with race group incorrectly identified in our consolidated database. Both Ids (F134145 & F158363) were incorrectly identified as Whites in our database. Now F134145 is Asian and F158363 is Black. The uncorrected race variable (RACEGRP) stays in DERIVE26 and the corrected race variable (CORRACE1) stays in UNOFF23. Since many analyses were already done using the uncorrected race variable, the Executive Committee has recommended to use the uncorrected race variable (RACEGRP) for Visit 1 and longitudinal analyses. The corrected version could be used for cross-sectional analyses other than Visit 1.

11.11 CENTER (Field Center)

CENTER		Visit 1 Center
N	Value	Description
3679	F	Forsyth County, NC
3148	J	Jackson City, MS
3827	M	Minneapolis Townships, MN
3694	W	Washington County, MD

The ARIC Study collects data in four diverse communities. This design was chosen so that data could be obtained for groups which differ by geography, race, and socio-economic status. The ARIC study was not designed to select a random or representative sample of the entire U.S. population.
This is a character variable that takes on the values of:

F: Forsyth County, North Carolina
J: The city of Jackson, Mississippi
W: Selected northwestern suburbs of Minneapolis, Minnesota
M: Washington County, Maryland

11.12 V2CENTER (Visit 2 Field Center)

V2CENTER		Visit 2 Center
N	Value	Description
3675	F	Forsyth County, NC
3147	J	Jackson City, MS
3828	M	Minneapolis Townships, MN
3698	W	Washington County, MD

If ARIC study participants move into another field center at visit 2, V2CENTER value is assigned to that field center. If not, V2CENTER is the same as CENTER.

12 Cornell Voltage LVH

12.1 LVHSCR21

LVHSCR21	*Cornell Voltage In UV (S In V3+r In AVL)*	
N	*Value*	*Description*
14209	Range	104 - 6925 (median=1178 mean=1247.2 std=555.9)
139		Missing

LVHSCR21 is a continuous Visit 2 variable defined to be the absolute value of ECGRA198 plus ECGRA170.

LVHSCR21 = | ECGRA198 | + ECGRA170
            = Missing if | ECGRA198 | + ECGRA170 < 100 uV

ECGRA198: S amplitude in V3.
ECGRA170: R amplitude in AVL.

12.2 NLVHSC21

NLVHSC21	*Cornell Voltage In mm*	
N	*Value*	*Description*
14209	Range	1.04 - 69.25 (median=11.78 mean=12.472 std=5.559)
139		Missing

NLVHSC21 is a continuous Visit 2 variable defined to be LVHSCR21 divided by 100.

NLVHSC21 = LVHSCR21 / 100.

12.3 CLVH21

CLVH21	*LVH Present By Cornell Definition*	
N	*Value*	*Description*
13849	0	No
360	1	Yes
139		Missing

CLVH21 is a dichotomous Visit 2 LVH variable. The algorithm for computation of CLVH21 is given in the table below.

CLVH21	GENDER	NLVHSC21
1	Male	Greater than 28
	Female	Greater than 22
0	Male	Less than or Equal to 28
	Female	Less than or Equal to 22

13 Incident Risk Factors

13.1 CHDRISK10yr_21 (10 Year Incident Risk Score for CHD at Visit 2)
(uc4677)

CHDRISK10YR_21		10 Year Incident Risk Score for CHD at Visit 2
N	Value	Description
13046	Range	0.2028299645 - 98.462089566 (median=5.2100244939 mean=7.83164481588 std=8.06911652379)
1302		Missing

CHDRISK10yr_21 is the predicted 10 year risk of incident coronary heart disease (CHD). It is a percentage variable thus can take values from 0 to 100 or missing. The beta-coefficients used for the prediction are given below. The beta coefficients were obtained from an output found in uc467701 and were published in ARIC manuscript 661(for those without diabetes)[1] and ARIC manuscript 781 (for those with diabetes)[2]. If a participant had prevalent CHD or had a missing value for at least one of the variables used, then predicted risk was not calculated and a missing value was assigned.

Participants were separated based on gender, race, and diabetes status. The predicted 10 year risk of incident CHD was then calculated using the following Cox regression equation:

$$CHDRISK10yr\_21 = 100 * \left[1 - \left(1 - P_0 \right)^{(\exp(RS - RS_0))} \right]$$

Where P_0 is a constant
RS_0 is a constant
RS is a linear combination of B-coefficients times the risk factor variables (see table below).

$CHDRISK10yr\_21 = Missing$
if any risk factor variable is missing
or
if PREVCHD23 ^=0

Risk Factor Variables	Beta Coefficients			
newage	0.31989	0.39378	0.63186	0.36528
newage_2	-0.090856	-0.22346	-0.15692	-0.27146
tccat2	0.1173	0.64727	0.33314	0.44555
tccat3	0.1173*	0.80937	0.37726	0.77279
tccat4	0.81459	0.9329	0.69569	0.77279
hdlcat1	1.07081	1.20919	0.79192	1.27295
hdlcat2	0.39727	0.91366	0.43293	0.9178
hdlcat3	0.3927	0.91366	0.43293	0.65401
hdlcat4	0.23253	0.56967	0.28026	0.61373
sbpb21	0.024899	0.015023	0.002253654	0.013634
Hyptmdcode21	0.8091	0.58733	0.6937	0.12
cursmk21	1.01048	1.10297	0.63094	0.37602
$1-P_0$	0.99126	0.99391	0.97262	0.97262
RS_0	2.93014	1.74618	0.20343	0.20343
	Black Females	White Females	Black Males	White Males

Table 1: CHD Risk for those **without Diabetes**: 10 year CHD Risk Score Beta coefficents, RS0, and 1-P0 values for participants without diabetes

* In this and other cases the repeating of a coefficient from the row above is not an error. The adjacent categories were collapsed for the particular population, for sample size reasons.

[1] Chambless LE, Folsom AR, Sharrett AR, Sorlie P, Couper D, Szklo M, Neito FJ. Coronary heart disease risk prediction in the ARIC Study. J Clin Epidemiol 2003;56:880-90.
[2] Folsom AR, Chambless LE, Duncan BB, Gilbert AC, Pankow JS. Prediction of coronary heart disease in middle-aged adults with diabetes. Diabetes Care 2003;10:2777-84.

Table 2: CHD Risk for those with Diabetes: 10-year CHD risk score beta coefficents, RS0, and 1-P0 values for participants with diabetes		
Risk Factor Variables	**Beta Coefficients**	
	Females	Males
racegrp	0.51819	0.49764
newage	0.11855	0.41088
newage_2	0.008189254	-0.26545
tccat23	0.66224	0.49266
tccat4	1.0978	1.04681
hdlcat12	0.38941	0.67931
hdlcat3	0.33487	-0.14568
sbpb21	0.15579	0.004552397
Hyptmdcode21	0.38741	-0.019692
cursmk21	0.091353	0.18137
$1-P_0$	0.97643	0.9291
RS_0	1.84209	0.49799

Continuous Variables used:
NEWAGE= (V2AGE21-55)/10
NEWAGE_2= $(NEWAGE)^2$

Categorical Variables used:
Total Cholesterol (all measured in mg/dl)
TCCAT1= 1 if LIPB01a <200
TCCAT2= 1 if 200 <= LIPB01a < 240
TCCAT3= 1 if 240 <= LIPB01a < 280
TCCAT4=1 LIPB01a >=280
TCAT23= 1 if 200<= LIPB01a <280 (combine tccat2 & tccat3)

High Density Lipids (all measured in mg/dl)
HDLCAT1=1 if LIPB03A< 35
HDLCAT2=1 if 35<=LIPB03A<45
HDLCAT3=1 if 45<=LIPB03A<50
HDLCAT4=1 if 50<=LIPB03A<60
HDLCAT5=1 if LIPB03A>=60
HDLCAT12=1 if LIPB03A<45 (combine hdlcat1 & hdlcat2)

General Term	Description
PRVCHD23	Prevalent Coronary Heart Disease
RACE	Race
GENDER	Gender
CURSMK21	Current Smoker
DIABTS23	Diabetic
V2AGE22	Age a Visit '2
LIPB03A	HDL-High Density Lipids (mg/dL)
HYPTMDCODE21	Took Medication for hypertension w/in 2wks using 2004 medication coding
SBPB21	SBP (2nd & 3rd Average) (mmHg)
LIPB01a	Total Cholesterol (mg-dL)

13.2 STROKERISK10YR_21 (10 Year Incident Stroke Risk Score at Visit 2)
(uc4678)

STROKERISK10YR_21	Predicted 10 year risk of incident Ischemic Stroke (V2)	
N	Value	Description
13462	Range	0.2151531704 - 87.277956225 (median=1.6489276986 mean=3.12298275884 std=4.57121185173)
886		Missing

STROKERISK10YR_21 is the predicted 10 year risk of incident Ischemic Stroke. It is a percentage variable thus can take values from 0 to 100 or missing. The beta-coefficients used for the prediction are given below. The beta coefficients were obtained from an output found in UC4077_3b[1] and were published in ARIC manuscript #824[2]. If a participant had prevalent stroke or had a missing value for at least one of the variables used, then the predicted risk was not calculated and a missing value was assigned.

Participants were separated based on gender. The 10 year predicted risk of incident Ischemic Stroke was then calculated using the following Cox regression equation:

$$\text{STROKERISK 10YR\_21} = 100 * \left[1 - \left(1 - P_0\right)^{\left(\exp(RS - RS_0)\right)} \right]$$

Where P_0 is a constant
   RS_0 is a constant
   RS is a linear combination of B-coefficients times the risk factor variables
 (see table below).

   STROKERISK10YR_21= Missing
      if any risk factor variables are missing
         or
      if PRVSTR21^=0

Table2: Calculating Risk: Categorical and continuous variables w/ Beta -coefficients used to calculate 10-year stroke risk.	Female	Male
racegrp	0.4155701	0.3514973
cursmk21	0.8002466	0.6931732
v2age41	0.0689097	0.0807621
prvchd23	0.6298822	0.7332341
hyptmdcode21	0.4072694	0.4544168
clvh21	0.808223	0.386121
diabts23	1.1371047	0.8892109
sbpb21	0.0174648	0.0184501
RS_0	5.79944	6.55671
$1-P_0$	0.99390574	0.989928

[1] J:\aric\sc\source\archive\zip\uc4077.zip
[2] Chambless LE, Heiss G, Shahar E, Earp MJ, Toole J. Ischemic stroke risk prediction in the Atherosclerosis Risk in Communities study. Am J Epidemiol 2004;160:259-269.

Varibles Used	Description
V2DATE21	Date of Visit X
GENDER	Gender
RACE	Race
CURSMK21	Current Smoker
V2AGE22	Age at Visit X
PRVCHD23	Prevalent CHD definition 3
HYPTMD21	Took Medication for hypertension w/in 2wks using 2004 medication coding
CLVH21	Left Ventricle hypertrophy
DIABTS23	Diabetes
SBPB21	Systolic BP (Ave)
PREVSTR21	Prevelant Stroke

13.3 DIABETESRISK9YR_21 (9 Year Incident Diabetes Risk at Visit 2)
(uc4679)

DIABETESRISK9YR_21	Predicted 9 year risk of incident type two diabetes	
N	Value	Description
10912	Range	0.1177580258 - 94.461065382 (median=10.931009739 mean=16.7371504725 std=16.0680959643)
3436		Missing

DIABETESRISK9YR_21 is the predicted 9 year risk of incident type two diabetes. It is a percentage variable thus can take values from 0 to 100 or missing. The beta-coefficients used for the prediction are given below.   The beta coefficients were obtained from an output found in uc439216[1] and were published in ARIC manuscript 808b[2] If a participant had prevalent diabetes or had a missing value for at least one of the variables used, then the predicted risk was not calculated and a missing value was assigned.

$$DIABETES\,9\,yr\_21 = \frac{1}{1 + e^{-RS}}$$

DIABETES9yr_21= Missing
     If DIABTS23^=0
     Or if any risk factor variables are missing

     RS is a linear combination of B-coefficients times the risk factor variables.
RS= -9.98078+ 0.017254*(V2AGE21) + 0.44330*(BLACK)+ 0.49810*(FAMDIABETES) + 0.0880*(CHMB07 $_{[mg/dl]}$)+ 0.011097 *(SBPB21$_{[mmHg]}$)-0.032616*(ANTA01$_{[cm]}$)
+0.027316*(ANTA07a$_{[cm]}$) - 0.012227*(LIPB03a $_{[mg/dL]}$) + 0.002710939*(LIPB02a $_{[mg/dL]}$)

BLACK= 1 if RACEGRP="B"
BLACK=0 if RACEGRP="W"
BLACK=missing otherwise.

FAMDIABETES- if either participants mother or father had diabetes then FAMDIABETES=1
          Neither mother nor father had diabetes then FAMDIABETES=0
FAMDIABETES=1 if HOM15B='Y' or HOM18B='Y' or HOM23B='Y' or HOM26B='Y'
FAMDIABETES =0 if (HOM15B='N' or HOM18B='N') and if (HOM23B='N' or HOM26B='N')   FAMDIABETES = .
Otherwise

List of Variables Used

Generic Term	Description	Visit 1	Visit 2	Visit 3	Visit 4
V2AGE21	Age at Visit X	v1age01	v2age22	v3age31	v4age41
RACEGRP	Race	racegrp	racegrp	racegrp	racegrp
LIPB03a	High density lipids (mg/dl)	hdl01	lipb03a	lipc3a	lipd3a
CHMB07	Fasting Glucose Value (mg/dl) [recalibrated]	glucos01	chmb07	lipc4a	lipd4a
DIABTS23	Prevalent Diabetes?	diabts03	diabts23	diabts34	diabts42
SBPB21	SBP- Systolic BP 2nd & 3rd average (mmHg)	sbpa21	sbpb21	sbpc22	sbpd19
LIPB02a	Triglycerides (mg/dl)	lipa02	lipb02a	lipc2a	lipd2a
ANTA01	Height (cm)	anta01	anta01	anta01	anta01
ANTA07a	Waist size (cm)	anta07a	anta07a	anta07a	anta07a
HOM15B	Natural Mother ever have Diabetes?	hom15b	hom15b	hom15b	hom15b
HOM18B	Natural Mother ever have Diabetes?	hom18b	hom18b	hom18b	hom18b
HOM23B	Natural Father ever have Diabetes	hom23b	hom23b	hom23b	hom23b
HOM26B	Natural Father ever have Diabetes	hom26b	hom26b	hom26b	hom26b

[1] j:\aric\sc\source\archive\zip\uc4392.zip

[2] Schmidt MI, Duncan BB, Bang H, Pankow J, Ballantyne CM, Golden S, Folsom AR, Chambless LE. Identifying individuals at high risk for diabetes: The Atherosclerosis Risk in Communities Study Diabetes Care 2005;28:2013-18.

14 MEDI-SPAN THERAPEUTIC CLASSIFICATION SYSTEM

The classification listings are current as of the time of this printing. Medi-Span may make revisions to the TCS to increase usefulness which may impact existing GPI values. This listing may be reproduced by printing the Record Types 1 through 3 from the optional Therapeutic Classification Reference File. Variable names for the MTC codes are MSRMTC1-MSRMTC17, in file MSRCOD24 for Visit 2.

Value $MTCNAME "000000" = "PLACEBO"

GROUPS 1-16 ANTI-INFECTIVE AGENTS

"010000"="PENICILLINS"
"011000"="PENICILLIN G"
"012000"="AMPICILLINS"
"013000"="PENICILLINASE-RESISTANT"
"014000"="EXTENDED SPECTRUM"
"015000"="AMIDINOPENICILLIN"
"019900"="PENICILLIN COMBINATIONS"
"020000"="CEPHALOSPORINS"
"021000"="CEPHALOSPORINS - 1ST GENERATION"
"022000"="CEPHALOSPORINS - 2ND GENERATION"
"023000"="CEPHALOSPORINS - 3RD GENERATION"
"030000"="MACROLIDE ANTIBIOTICS"
"031000"="ERYTHROMYCINS"
"031099"="ERYTHROMYCIN COMBINATIONS"
"032000"="TROLEANDOMYCIN"
"033000"="LINCOMYCINS"
"034000"="AZITHROMYCIN"
"035000"="CLARITHROMYCIN"
"035500"="MIOCAMYCIN"
"035700"="ROXITHROMYCIN"
"036000"="SPIRAMYCIN"
"040000"="TETRACYCLINES"
"049900"="TETRACYCLINE COMBINATIONS"
"050000"="FLUROQUINOLONES"
"060000"="R E S E R V E D"
"070000"="AMINOGLYCOSIDES"
"080000"="SULFONAMIDES"
"089900"="SULFA COMBINATIONS"
"090000"="ANTIMYCOBACTERIAL AGENTS"
"099900"="ANTI TB COMBINATIONS"
"100000"="R E S E R V E D"
"110000"="ANTIFUNGALS"
"120000"="ANTIVIRAL"
"129900"="ANTIVIRAL COMBINATIONS"
"130000"="ANTIMALARIAL"
"139900"="ANTI MALARIAL COMBINATIONS"
"140000"="AMEBICIDES"
"149900"="AMEBICIDE COMBINATIONS"
"150000"="ANTHELMINTIC"
"159900"="ANTHELMINTIC COMBINATIONS"
"160000"="MISC. ANTI-INFECTIVES"
"161000"="POLYMYXINS"
"162000"="CHLORAMPHENICOLS"
"163000"="LEPROSTATICS"
"164000"="ANTIPROTOZOAL AGENTS"

"165000"="ANTIINFECTIVE ADJUVANTS"
"169900"="MISC. ANTIINFECTIVE COMBINATIONS"

GROUPS 17-20 BIOLOGICALS

"170000"="VACCINES"
"171000"="VIRAL VACCINES"
"171099"="VACCINE COMBINATIONS"
"172000"="BACTERIAL VACCINES"
"180000"="TOXOIDS"
"189900"="TOXOID COMBINATIONS"
"190000"="ANTISERA"
"191000"="IMMUNE SERUMS"
"192000"="ANTITOXINS-ANTIVENINS"
"199900"="ANTISERA COMBINATIONS"
"200000"="BIOLOGICALS MISC"
"201000"="ALLERGENIC EXTRACTS"

GROUPS 21 - ANTINEOPLASTIC AGENTS

"210000"="ANTINEOPLASTICS"
"211000"="ALKYLATING AGENTS"
"211010"="NITROGEN MUSTARDS"
"211020"="NITROSOUREAS"
"212000"="ANTINEOPLASTIC ANTIBIOTICS"
"213000"="ANTIMETABOLITES"
"214000"="ANTINEOPLASTIC HORMONES"
"214020"="ANDROGENS-ANTINEOPLASTIC"
"214030"="ESTROGENS-ANTINEOPLASTIC "
"214040"="PROGESTINS-ANTINEOPLASTIC"
"214050"="ANTINEOPLASTIC HORMONES MISC."
"215000"="MIOTIC INHIBITORS"
"216000"="RADIOPHARMACEUTICALS"
"217000"="ANTINEOPLASTICS MISC."
"217030"="ANTINEOPLASTICS - INTERLUEKINS"
"218000"="INVESTIGATIONAL-ANTINEOPLASTIC"
"219900"="ANTINEOPLASTIC COMBINATIONS"

GROUPS 22-30 ENDOCRINE AND METABOLIC DRUGS

"220000"="CORTICOSTEROIDS"
"221000"="GLUCOCORTICOSTEROIDS"
"221099"="STEROID COMBINATIONS"
"222000"="MINERALOCORTICOIDS "
"230000"="ANDROGEN-ANABOLIC"
"231000"="ANDROGENS"
"231099"="ANDROGEN COMBINATIONS"
"232000"="ANABOLIC STEROIDS"
"240000"="ESTROGENS"
"249900"="ESTROGEN COMBINATIONS"
"249910"="ESTROGEN-ANDROGEN"
"249920"="ESTROGEN-ANTIANXIETY AGENT"
"249930"="ESTROGEN-PROGESTIN"
"249940"="ESTROGEN-ANDROGEN-PROGESTIN"
"250000"="CONTRACEPTIVES"
"251000"="PROGESTIN OC'S"

"251500"="PROGESTIN CONTRACEPTIVES - INJECTABLE"
"252000"="PROGESTERONE IUD"
"253000"="PROGESTIN IMPLANTS"
"259800"="COMBINATION CONTRACEPTIVES - INJECTABLE"
"259900"="COMBINATIONS OC'S"
"259910"="BIPHASIC OC'S"
"259920"="TRIPHASIC OC'S"
"260000"="PROGESTINS"
"270000"="ANTIDIABETIC"
"271000"="INSULIN"
"271010"="MIXED INSULIN"
"271020"="BEEF INSULIN"
"271030"="PORK INSULIN"
"271040"="HUMAN INSULIN"
"272000"="SULFONYLUREAS"
"272099"="SULFOYLUREA COMBINATIONS"
"273000"="DIABETIC OTHER"
"274000"="ALDOSE REDUCTASE INHIBITORS"
"280000"="THYROID"
"281000"="THYROID HORMONES"
"283000"="ANTITHYROID AGENTS"
"290000"="OXYTOCICS"
"292000"="ABORTIFACIENTS"
"292010"="PROSTAGLANDINS"
"300000"="MISC. ENDOCRINE"
"301000"="GROWTH HORMONE"
"302000"="POSTERIOR PITUITARY"
"302010"="VASOPRESSIN"
"303000"="CORTICOTROPIN"
"309900"="MISC. ENDOCRINE COMBINATIONS"

GROUPS 31-40 CARDIOVASCULAR AGENTS

"310000"="CARDIOTONICS"
"311000"="AMRINONE"
"312000"="DIGITALIS"
"320000"="ANTIANGINAL AGENTS"
"321000"="NITRATES"
"322000"="ANTIANGINALS - OTHER"
"329900"="ANTIANGINAL COMBINATIONS"
"329910"="PETN COMBINATIONS"
"330000"="BETA BLOCKERS"
"331000"="BETA BLOCKERS NON-SELECTIVE"
"332000"="BETA BLOCKERS CARDIO-SELECTIVE"
"333000"="ALPHA-BETA BLOCKERS"
"340000"="CALCIUM BLOCKERS"
"350000"="ANTIARRHYTHMIC"
"350500"="ANTIARRHYTHMICS TYPE I -- NONSPECIFIC"
"351000"="ANTIARRHYTHMICS TYPE 1-A"
"352000"="ANTIARRHYTHMICS TYPE 1-B"
"353000"="ANTIARRHYTHMICS TYPE 1-C"
"354000"="ANTIARRHYTHMICS TPYE III"
"355000"="MISC. ANTIARRHYTHMIC"
"360000"="ANTIHYPERTENSIVE"
"361000"="ACE INHIBITORS"
"362000"="ADRENOLYTIC ANTIHYPERTENSIVES"
"362010"="ADRENOLYTICS - CENTRAL"
"362020"="ADRENOLYTICS - PERIPHERAL"

"362030"="RESERPINE"
"363000"="ALPHA BLOCKERS"
"364000"="VASODILATORS "
"364010"="FLUOROQUINOLONE VASODIALATORS"
"365000"="ANTIHYPERTENSIVE - MAOIS"
"366000"="MISC. ANTIHYPERTENSIVES"
"369900"="ANTIHYPERTENSIVE COMBINATIONS"
"369910"="RESERPINE COMBINATIONS"
"369920"="BETA BLOCKER COMBINATIONS"
"370000"="DIURETICS"
"371000"="CARBONIC ANHYDRASE INHIBITORS"
"372000"="LOOP DIURETICS"
"373000"="MERCURIAL DIURETICS"
"374000"="OSMOTIC DIURETICS"
"375000"="POTASSIUM SPARING DIURETICS"
"376000"="THIAZIDES"
"379000"="MISC. DIURETICS"
"379900"="COMBINATION DIURETICS"
"379910"="DIURETICS & POTASSIUM"
"379920"="NON-PRESCRIPTION DIURETICS"
"380000"="PRESSORS"
"389000"="EMERGENCY KITS"
"390000"="ANTIHYPERLIPIDEMIC"
"391000"="BILE SEQUESTRANTS"
"400000"="MISC. CARDIOVASCULAR"
"401000"="PERIPHERAL VASODILATORS"
"401099"="VASODILATOR COMBINATIONS"
"401500"="MICROVASODILATORS"
"402000"="CARDIOPLEGIC SOLN"
"402500"="VASOCONSTRICTOR INHIBITORS"

GROUPS 41-45 RESPIRATORY AGENTS

"410000"="ANTIHISTAMINES"
"411000"="ANTIHISTAMINES - ALKYLAMINES"
"412000"="ANTIHISTAMINES - ETHANOLAMINES"
"413000"="ANTIHISTAMINES - ETHYLENEDIAMINES"
"414000"="ANTIHISTAMINES - PHENOTHIAZINES"
"415000"="ANTIHISTAMINES - PIPERIDINES"
"415500"="ANTIHISTAMINES - NON-SEDATING"
"416000"="ANTIHISTAMINES - MISC."
"419900"="ANTIHISTAMINE COMBINATIONS"
"419910"="ANTIHISTAMINE MIXTURES"
"419920"="ANTIHISTAMINE - ANTICHOLINERGICS"
"420000"="DECONGESTANTS"
"421000"="SYMPATHOMIMETICS"
"421010"="SYSTEMIC DECONGESTANTS"
"421020"="TOPICAL DECONGESTANTS"
"421030"="NASAL INHALERS"
"422000"="NASAL STEROIDS"
"425000"="MISC. NASAL PREPARATIONS"
"425099"="MISC. NASAL COMBINATION PREPARATIONS"
"429900"="NASAL COMBINATIONS"
"429910"="DECONGESTANT-ANTIHISTAMINE"
"430000"="COUGH/COLD"
"431000"="ANTITUSSIVES"
"431010"="ANTITUSSIVE - NARCOTIC"

"431020"="ANTITUSSIVE - NONNARCOTIC"
"432000"="EXPECTORANTS"
"432020"="IODINE EXPECTORANTS"
"432099"="EXPECTORANT MIXTURES"
"433000"="MUCOLYTICS"
"434000"="MISC. RESPIRATORY INHALENTS"
"434010"="AROMATIC INHALANTS"
"439900"="COUGH/COLD COMBINATIONS"
"439910"="DECONGESTANT-ANALGESIC"
"439915"="DECONGESTANT-ANALGESIC-ANTICHOLINERGIC"
"439920"="ANTIHISTAMINE-ANALGESIC"
"439925"="ANTIHISTAMINE-ANALGESIC-ANTICHOLINERGIC"
"439930"="DECONGESTANT & ANTIHISTAMINE"
"439935"="DECONGEST-ANTIHISTAMINE-ANTICHOLINERGIC"
"439940"="DECONGESTANT-ANTIHISTAMINE-ANALGESIC"
"439945"="DECONGEST-ANTIHIST-ANALGESIC-ANTICHOLIN"
"439950"="ANTITUSSIVE COMBOS-NARCOTIC"
"439951"="NARCOTIC ANTITUSSIVE-DECONGESTANT"
"439952"="NARCOTIC ANTITUSSIVE-ANTIHISTAMINE"
"439953"="NARCOTIC ANTITUSSIVE-DECONGEST-ANTIHIST"
"439954"="NARC ANTITUSS-DECONGEST-ANTIHISTA-ANALG"
"439955"="ANTITUSSIVE COMBOS-NON-NARCOTIC"
"439956"="NON-NARC ANTITUSSIVE-DECONGESTANT"
"439957"="NON-NARC ANTITUSSIVE-ANTIHISTAMINE"
"439958"="NON-NARC ANTITUSS-DECONGEST-ANTIHIST"
"439959"="NON-NARC ANTITUSS-DECONG-ANTIHISTA-ANALG"
"439960"="EXPECTORANT COMBINATIONS"
"439962"="DECONGESTANT W/EXPECTORANT"
"439964"="ANTIHISTAMINE W/EXPECTORANT"
"439966"="DECONGESTANT-ANTIHISTAMINE W/EXPECTORANT"
"439968"="DECONGEST-ANTIHIST-ANALGESIC E/EXPECT"
"439970"="ANTITUSSIVE-EXPECTORANT"
"439973"="ANTITUSSIVE-EXPECTORANT-DECONGESTANT"
"439975"="ANTITUSSIVE-EXPECTORANT-ANTIHISTAMINE"
"439978"="ANTITUSSIVE-EXPECTORANT-ANALGESIC"
"439980"="ANTITUSSIVE-EXPECTOR-DECONGEST-ANTIHIST"
"439983"="ANTITUSSIVE-EXPECTOR-DECONGEST-ANALGESIC"
"439985"="ANTITUSSIVE-EXPECTOR-ANTIHISTA-ANALGESIC"
"439988"="ANTITUSS-EXPECTOR-DECONG-ANTIHISTA-ANALG"
"439990"="MISC. RESPIRATORY COMBINATIONS"
"440000"="ANTIASTHMATICS"
"441000"="ANTICHOLINERGICS"
"441500"="ANTI-INFLAMMATORY AGENTS"
"442000"="SYMPATHOMIMETICS"
"442010"="BETA ADRENERGICS"
"442020"="MIXED ADRENERGICS"
"442099"="ADRENERGIC COMBINATIONS"
"443000"="XANTHINES"
"444000"="STEROID INHALANTS"
"449900"="ASTHMA COMBINATIONS"
"449910"="XANTHINE-EXPECTORANTS"
"449920"="XANTHINE-SYMPATHOMIMETICS"
"449922"="XANTHINE-SYMPATHOMIMETIC-EXPECTORANT"
"449925"="XANTHINE-BARBITURATES"
"449927"="SYMPATHOMIMETIC-BARBITURATE"
"449930"="XANTHINE-SYMPATHOMIMETIC-BARBITURATE"
"449932"="XANTHINE-SYMPATHO-BARBIT-EXPECTOR"
"449940"="SYMPATHOMIMETIC-EXPECTORANTS"

"449950"="XANTHINE-ANTITUSSIVE"
"449990"="MISC. ANTIASTHMATIC PRODUCTS"
"450000"="MISC. RESPIRATORY"
"451000"="ALPHA-PROTEINASE INHIBITOR (HUMAN)"

GROUPS 46-52 GASTROINTESTINAL AGENTS

"460000"="LAXATIVES"
"461000"="SALINE LAXATIVES"
"461099"="SALINE LAXATIVE MIXTURES"
"462000"="STIMULANT LAXATIVES"
"463000"="BULK LAXATIVES"
"464000"="LUBRICANT LAXATIVES"
"465000"="SURFACTANT LAXATIVES"
"466000"="MISC. LAXATIVES"
"469900"="LAXATIVE COMBINATIONS"
"469910"="LAXATIVES & DSS"
"469920"="BOWEL PREP KITS"
"470000"="ANTIDIARRHEALS"
"471000"="ANTIPERISTALTIC AGENTS"
"472000"="GI ADSORBANTS"
"473000"="MISC. ANTIDIARRHEAL AGENTS"
"479900"="ANTIDIARRHEAL COMBINATIONS"
"479910"="DIARRHEA COMBINATIONS-OPIATE"
"479920"="DIARRHEA COMBINATIONS-ANTICHOLINERGIC"
"480000"="ANTACIDS"
"481000"="ANTACIDS - ALUMINUM SALTS"
"482000"="ANTACIDS - BICARBONATE"
"482099"="ANTACIDS - BICARBONATE COMBINATIONS"
"483000"="ANTACIDS - CALCIUM SALTS"
"484000"="ANTACIDS - MAGNESIUM SALTS"
"489900"="ANTACID COMBINATIONS"
"489905"="ANTACID & DIMETHICONE"
"489910"="ANTACID-SIMETHICONE"
"490000"="ULCER DRUGS"
"491000"="GI ANTISPASMODICS - ANTICHOLINERGICS"
"491010"="BELLADONNA ALKALOIDS"
"491020"="QUATERNARY ANTICHOLINERGICS"
"491030"="ANTISPASMODICS"
"491040"="ANTICHOLINERGICS"
"491099"="ANTICHOLINERGIC COMBINATIONS"
"492000"="H-2 ANTAGONISTS"
"492500"="PROSTAGLANDINS"
"493000"="MISC. ANTI-ULCER"
"500000"="ANTIEMETICS"
"501000"="ANTIEMETICS - ANTIDOPAMINERGIC"
"502000"="ANTIEMETICS - ANTICHOLINERGIC"
"503000"="ANTIEMETICS MISC."
"503099"="ANTIEMETICS COMBINATIONS"
"510000"="DIGESTIVE AIDS"
"511000"="CHOLERETICS"
"511099"="BILE COMBINATIONS"
"512000"="DIGESTIVE ENZYMES"
"512099"="DIGESTIVE ENZYME COMBINATIONS"
"513000"="GASTRIC ACIDIFIERS"
"514000"="HYDROCHOLERETICS"
"519900"="DIGESTIVE AIDS - MIXTURES"
"519910"="DIGESTIVE MIXTURES W/ SIMETHICONE"

"519920"="DIGESTIVE MIXTURES W/ ANTICHOLINERGICS"
"520000"="MISC. GI"
"521000"="GALLSTONE SOLUBILIZING AGENTS"
"522000"="ANTIFLATULENTS"
"522099"="ANTIFLATULENTS COMBINATIONS"
"523000"="GI STIMULANTS"
"523099"="GI STIMULANTS COMBINATIONS"
"524000"="INTESTINAL ACIDIFIERS"
"525000"="INFLAMMATORY BOWEL AGENTS"
"526000"="HEPATOTROPIC"

GROUPS 53-56 GENITOURINARY PRODUCTS

"530000"="URINARY ANTIINFECTIVES"
"539900"="COMBINATION URINARY ANTIINFECTIVES"
"539905"="METHENAMINE COMBINATIONS"
"539910"="URINARY ANTIINFECTIVE & ANALGESIC"
"539920"="URINARY ANTISEPTIC - ANTISPASMODIC"
"539930"="URINARY ANTIINFECTIVE-ANTISPASM-ANALGESIC"
"540000"="URINARY ANTISPASMODICS"
"549900"="URINARY ANTISPASMODIC COMBINATIONS"
"550000"="VAGINAL PRODUCTS "
"551000"="VAGINAL ANTIINFECTIVES"
"551010"="MISC. VAGINAL ANTIINFECTIVES"
"551099"="VAGINAL ANTIINFECTIVE COMBINATIONS"
"5515O0"="VAGINAL ANTIINFLAMMATORY AGENTS"
"551510"="VAGINAL CORTICOSTEROIDS"
"552000"="DOUCHE PRODUCTS"
"553000"="SPERMICIDES"
"553500"="VAGINAL ESTROGENS"
"554000"="MISC. VAGINAL PRODUCTS"
"554110"="FERTILITY ENHANCERS"
"560000"="MISC. GENITOURINARY PRODUCTS"
"561000"="ACIDIFIERS"
"561010"="PHOSPHATES"
"561020"="SYSTEMIC ACIDIFIERS"
"562000"="ALKALINIZERS"
"562020"="CITRATES"
"563000"="URINARY ANALGESICS"
"565000"="DMSO"
"566000"="URINARY STONE AGENTS"
"567000"="G U IRRIGANTS"
"567010"="ANTIINFECTIVE GU IRRIGANTS"
"568000"="UROPROTECTANTS"
"568500"="PROSTATIC HYPERTROPHY AGENTS"

GROUPS 57-63 CENTRAL NERVOUS SYSTEM DRUGS

"570000"="ANTIANXIETY AGENTS"
"571000"="BENZODIAZEPINES"
"571020"="BENZODIAZEPINE ANTAGONISTS"
"572000"="MISC. ANTIANXIETY AGENTS"
"580000"="ANTIDEPRESSANTS"
"581000"="MAO INHIBITOS"
"582000"="TRICYCLIC AGENTS"
"583000"="MISC. ANTIDEPRESSANTS"

"590000"="ANTIPSYCHOTICS"
"591000"="BUTYROPHENONES"
"591500"="DIBENZODIAZEPINES"
"592000"="PHENOTHIAZINES"
"593000"="THIOXANTHINES "
"594000"="MISC. ANTIPSYCHOTICS"
"595000"="LITHIUM"
"600000"="HYPNOTICS"
"601000"="BARBITURATE HYPNOTICS"
"602000"="NON-BARBITURATE HYPNOTICS"
"602010"="BENZODIAZEPINE HYPNOTICS"
"602040"="IMIDAZOPYRIDINE HYPNOTICS"
"603000"="ANTIHISTAMINE HYPNOTICS"
"603099"="ANTIHISTAMINE HYPNOTIC COMBINATIONS"
"609900"="HYPNOTIC COMBINATIONS"
"610000"="STIMULANTS"
"611000"="AMPHETAMINES"
"611099"="AMPHETAMINE MIXTURES"
"612000"="ANOREXIANTS NON-AMPHETAMINE"
"612099"="ANOREXIANT COMBINATIONS"
"613000"="ANALEPTICS"
"613099"="ANALEPTIC COMBINATIONS"
"614000"="MISC. STIMULANTS"
"620000"="MISC. PSYCHOTHERAPEUTIC"
"621000"="SMOKING DETERRENTS"
"621099"="SMOKING DETERRENT COMBINATIONS"
"629900"="COMBINATION PSYCHOTHERAPEUTICS"
"630000"="R E S E R V E D"

GROUPS 64-71 ANALGESICS AND ANESTHETICS

"640000"="ANALGESICS - NONNARCOTIC"
"641000"="SALICYLATES"
"641099"="SALICYLATE COMBINATIONS"
"642000"="ANALGESICS OTHER"
"642099"="ANALGESICS - OTHER COMBINATIONS"
"649900"="ANALGESIC COMBINATIONS"
"649910"="ANALGESIC-SEDATIVES"
"649920"="ANALGESIC-ANTICHOLINERGICS"
"650000"="ANALGESICS - NARCOTIC"
"651000"="NARCOTIC AGONISTS"
"652000"="NARCOTIC PARTIAL AGONISTS"
"654000"="NARCOTIC ANTAGONISTS"
"659900"="NARCOTIC COMBINATIONS"
"659910"="CODEINE COMBINATIONS"
"659913"="DIHYDROCODEINONE COMBINATIONS"
"659917"="HYDROCODONE COMBINATIONS"
"659920"="PROPOXYPHENE COMBINATIONS"
"659930"="MEPERIDINE COMBINATIONS"
"659940"="PENTAZOCINE COMBINATIONS"
"660000"="ANTI-RHEUMATIC"
"661000"="NSAIA'S"
"661010"="PHENYLBUTAZONES"
"661099"="NSAIA COMBINATIONS"
"662000"="GOLD COMPOUNDS"
"662500"="ANTI-RHEUMATIC ANTIMETABOLITE"
"663000"="MISC. ANTI-RHEUMATIC"

"663099"="MISC. ANTI-RHEUMATIC COMBINATIONS"
"670000"="MIGRAINE PRODUCTS"
"679900"="MIGRAINE COMBINATION"
"679910"="ERGOT COMBINATIONS"
"680000"="GOUT"
"681000"="URICOSURICS"
"689900"="COMBINATION GOUT DRUGS"
"690000"="LOCAL ANESTHETICS - PARENTERAL"
"691000"="LOCAL ANESTHETICS - AMIDES"
"692000"="LOCAL ANESTHETICS - ESTERS"
"699900"="LOCAL ANESTHETIC COMBINATIONS"
"699910"="LOCAL ANESTHETIC & EPINEPHRINE"
"700000"="GENERAL ANESTHETICS"
"700500"="ANESTHETIC GASSES"
"701000"="BARBITURATE ANESTHETICS"
"702000"="VOLATLE ANESTHETICS"
"704000"="MISC. ANESTHETICS"
"704099"="ANESTHETIC COMBINATIONS"
"710000"="R E S E R V E D"

GROUPS 72-76 NEUROMUSCULAR DRUGS

"720000"="ANTICONVULSANT"
"721000"="BENZODIAZEPINES"
"722000"="HYDANTOINS"
"723000"="OXAZOLIDINEDIONES"
"724000"="SUCCINIMIDES"
"725000"="VALPROIC ACID"
"726000"="MISC. ANTICONVULSANTS"
"726099"="ANTICONVULSANT COMBINATIONS"
"730000"="ANTIPARKINSONIAN"
"731000"="ANTIPARKINSONIAN ANTICHOLINERGICS"
"732000"="ANTIPARKINSONIAN DOPAMINERGIC"
"732099"="CARBIDOPA-LEVODOPA"
"733000"="ANTIPARKINSONIAN MONOAMINE OXIDASE INHIBITOR"
"740000"="NEUROMUSCULAR BLOCKERS"
"741000"="DEPLOARIZING MUSCLE RELAXANTS"
"742000"="NONDEPLOARIZING MUSCLE RELAXANTS"
"750000"="SKELETAL MUSCLE RELAXANTS"
"751000"="CENTRAL MUSCLE RELAXANTS"
"752000"="DIRECT MUSCLE RELAXANTS"
"753000"="MISC. MUSCLE RELAXANTS"
"759900"="MUSCLE RELAXANT COMBINATIONS"
"760000"="ANTIMYASTHENIC AGENTS"
"769900"="ANTIMYASTHENIC COMBINATIONS"

GROUPS 77-81 NUTRITIONAL PRODUCTS

"770000"="VITAMINS"
"771000"="WATER SOLUBLE VITAMINS"
"771010"="VITAMIN B-1"
"771020"="VITAMIN B-2"
"771030"="VITAMIN B-3"
"771040"="VITAMIN B-5"
"771050"="VITAMIN B-6"
"771060"="BIOTIN"

"771070"="PABA"
"771080"="VITAMIN C"
"772000"="OIL SOLUBLE VITAMINS"
"772010"="VITAMIN A"
"772020"="VITAMIN D"
"772030"="VITAMIN E"
"772040"="VITAMIN K"
"773000"="MISC. NUTRITIONAL FACTORS"
"773030"="BIOFLAVINOIDS"
"773099"="MISC. NATURAL VITAMINS"
"780000"="MULTIVITAMINS"
"781000"="VITAMIN MIXTURES"
"781010"="VITAMINS A & D"
"781015"="VITAMINS A & D W/ C"
"781017"="VITAMINS A, C, D & E"
"781020"="VITAMINS ACE & ZN"
"781030"="VITAMINS B 1-2-3"
"781040"="VITAMINS C & E"
"781045"="NIACIN W/ C"
"781050"="VITAMINS B1 & B6"
"781060"="VITAMINS B1, B6 & B12"
"781100"="B-COMPLEX VITAMINS"
"781110"="BREWERS YEAST"
"781200"="B-COMPLEX W/ C"
"781205"="B-COMPLEX W/ C & MG"
"781210"="B-COMPLEX W/ C + MG ZN"
"781220"="B-COMPLEX W/ C & E"
"781225"="B-COMPLEX W/ C & E + ZN"
"781300"="B-COMPLEX W/ FOLIC ACID"
"781330"="B-COMPLEX W/ C FOLIC ACID"
"781400"="B-COMPLEX W/ IRON"
"781500"="B-COMPLEX W/ MINERALS"
"781600"="BIOFLAVONOID PRODUCTS"
"782000"="MULTIPLE VITAMINS"
"782010"="HEXAVITAMINS"
"782100"="MULTIPLE VITAMINS W/ IRON"
"783000"="MULTIPLE VITAMINS & MINERALS"
"783100"="MULTIPLE VITAMINS W/ MINERALS"
"783400"="MULTIPLE VITAMINS W/ FLUORIDE"
"783500"="MULTIPLE VITAMINS W/ CALCIUM"
"784000"="PEDIATRIC VITAMINS"
"784015"="PEDIATRIC VITAMINS A & D W/ C"
"784100"="PEDIATRIC MULTIPLE VITAMINS"
"784200"="PED MULTIPLE VITAMINS W/ MINERALS"
"784300"="PED MV W/ IRON"
"784400"="PED MV W/ FLUORIDE"
"784405"="PED VITAMINS ACD W/FLOURIDE"
"784410"="PED MV W/FLUORIDE"
"784500"="PED MULTIPLE VITAMINS W/FL & FE"
"784520"="PED VITAMINS ACD FLUORIDE & IRON"
"785000"="SPECIALTY VITAMINS PROCDUCTS"
"785100"="PRENATAL VITAMINS"
"785110"="PRENATAL MV & MINERALS W/ IRON"
"785120"="PRENATAL MV & MINERALS W/ IRON & FA"
"785130"="PRENATAL MV & MINERALS W/ FA"
"785200"="VITAMINS W/ LIPOTROPICS"
"785300"="VITAMINS W/ HORMONES"
"786000"="HEMATINIC-VITAMIN PRODUCTS"

"786100"="IRON W/ VITAMINS"
"786200"="B-12 W/ VITAMINS"
"786300"="IRON & B12 W/ VITAMINS"
"790000"="MINERALS - ELECTROLYTES"
"790500"="BICARBONATES"
"791000"="CALCIUM"
"791099"="CALCIUM COMBINATIONS"
"792000"="CHLORIDE"
"793000"="FLUORIDE"
"793500"="IODINE PRODUCTS"
"794000"="MAGNESIUM"
"794099"="MAGNESIUM COMBINATIONS"
"795000"="MANGANESE"
"796000"="PHOSPHATE"
"797000"="POTASSIUM"
"797099"="POTASSIUM COMBINATIONS"
"797500"="SODIUM"
"798000"="ZINC"
"798099"="ZINC COMBINATIONS"
"798500"="MINERAL COMBINATIONS"
"799000"="TRACE MINERALS"
"799099"="TRACE MINERAL COMBINATIONS"
"799900"="ELECTROLYTE MIXTURES"
"799910"="ELECTROLYTES ORAL"
"799920"="ELECTROLYTES PARENTERAL"
"799930"="ELECTROLYTES & DEXTROSE"
"799940"="ELECTROLYTES & INVERT SUGAR"
"799950"="PARENTERAL ELECTROLYTES W/ FRUCTOSE"
"800000"="NUTRIENTS"
"801000"="CARBOHYDRATE"
"802000"="LIPIDS"
"803000"="PROTEIN"
"803010"="PROTEIN PRODUCTS"
"803020"="AMINO ACID MIXTURES"
"803030"="AMINO ACIDS-SINGLE"
"804000"="LIPOTROPICS"
"804099"="LIPOTROPIC COMBINATIONS"
"805000"="MISC. NUTRITIONAL SUBSTANCES"
"805099"="MISC. NUTRITIONAL SUBSTANCES COMBINATIONS"
"810000"="DIETARY PRODUCTS"
"811000"="INFANT FOODS"
"812000"="NUTRITIONAL SUPPLEMENTS"
"812010"="NUTRITIONAL SUPPLEMENTS - DIET AIDS"
"813000"="TUBE FEEDINGS"
"814000"="NUTRITIONAL SUBSTITUTES"
"814010"="SALT SUBSTITUTES"
"814020"="SWEETNERS"
"819000"="NUTRITIONAL MODIFIERS"

GROUPS 82-85 HEMATOLOGICAL AGENTS

"820000"="HEMATOPOETIC AGENTS"
"821000"="COBALAMINES"
"821010"="LIVER PREPARATIONS"
"821500"="INTRINSIC FACTOR"
"822000"="FOLIC ACID"
"823000"="IRON"
"823099"="IRON COMBINATIONS "

"824000"="COLONY STIMULATIG FACTOR"
"824010"="ERYTHROPOIETINS"
"824020"="LUEKOCYTES"
"824030"="PLATELETS"
"827000"="MISC. HEMATOPOETIC AGENTS"
"829900"="HEMOATOPOETIC MIXTURES"
"829910"="COBALAMINE COMBINATIONS"
"829920"="IRON COMBINATIONS"
"829930"="IRON W/ B12"
"829940"="IRON W/ FOLIC ACID"
"829950"="IRON-B12-FOLATE"
"830000"="ANTICOAGULANTS"
"831000"="HEPARINS"
"831010"="LOW MOLECULAR WEIGHT HEPARINS"
"832000"="COUMARIN ANTICOAGULANTS"
"833000"="INDANDIONE ANTICOAGULANTS"
"834000"="IN VIRO ANTICOAGULANTS"
"840000"="HEMOSTATICS"
"841000"="HEMOSTATICS - SYSTEMIC"
"841099"="SYSTEMIC HEMOSTATIC COMBINATIONS"
"842000"="HEMOSTATICS - TOPICAL"
"850000"="MISC. HEMATOLOGICAL"
"851000"="ANTIHEMOPHILIC PRODUCTS"
"851500"="ANTIPLATELET"
"851599"="ANTIPLATELET COMBINATIONS"
"852000"="HEMATORHEOLOGICAL"
"852500"="HEMIN"
"853000"="PLASMA EXPANDERS"
"854000"="PLASMA PROTEINS"
"855000"="PROTAMINE"
"856000"="THROMBOLYTIC ENZYMES"
"856010"="TISSUE PLASMINOGEN ACTIVATOR"
"857000"="HEMATOLOGIC OXYGEN TRANSPORTER"

GROUPS 86-91 TOPICAL PRODUCTS

"860000"="OPHTHALMIC"
"861000"="OPHTHALMIC ANTIINFECTIVES"
"861010"="OPHTHALMIC ANTIBIOTICS"
"861020"="OPHTHALMIC SULFONAMIDES"
"861030"="OPHTHALMIC ANTIVIRALS"
"861040"="OPHTHALMIC ANTIFUNGAL"
"861050"="OPHTHALMIC ANTISEPTICS"
"861099"="OPHTHALMIC ANTIINFECTIVE COMBINATIONS"
"862000"="ARTIFICIAL TEARS AND LUBRICANTS"
"862010"="ARTIFICIAL TEAR SOLUTIONS"
"862020"="ARTIFICIAL TEAR OINTMENTS"
"862030"="ARTIFICIAL TEAR INSERT"
"862040"="GONIOSCOPIC SOLUTION"
"862500"="BETA-BLOCKERS - OPHTHALMIC"
"863000"="OPHTHALMIC STEROIDS"
"863099"="OPHTHALMIC STEROID COMBINATIONS"
"863500"="CYCLOPLEGICS"
"863599"="CYCLOPLEGIC COMBINATIONS"
"864000"="OPHTHALMIC DECONGESTANTS"
"864099"="OPHTHALMIC DECONGESTANT COMBINATIONS"
"865000"="MIOTICS"
"865010"="MIOTICS - DIRECT ACTING"

"865020"="MIOTICS - CHOLINESTERASE INHIBITORS"
"865099"="MIOTIC COMBINATIONS"
"866000"="ADRENERGIC MYDRIATICS"
"867500"="OPHTHALMIC LOCAL ANESTHETICS"
"868000"="MISC. OPHTHALMICS"
"868010"="OPHTHALMIC ENZYMES"
"868020"="OPHTHALMIC ANTIALLERGIC"
"868030"="OPHTHALMIC IRRIGATION SOLUTIONS"
"868040"="OPHTHALMIC HYPEROSMOLAR PRODUCTS"
"868050"="OPHTHALMIC NSAIA'S AGENT"
"868060"="OPHTHALMIC DIAGNOSTIC PRODUCTS"
"868070"="MISC. OPHTHALMICS"
"869000"="CONTACT LENS SOLUTIONS"
"869010"="HARD LENS PRODUCTS"
"869020"="SOFT LENS PRODUCTS"
"869030"="OXYGEN PERMEABLE LENS PRODUCTS"
"870000"="OTIC"
"871000"="OTIC ANTIBIOTICS"
"871099"="OTIC ANTIBIOTIC COMBINATIONS"
"872000"="OTIC ANALGESICS"
"873000"="OTIC STEROIDS"
"874000"="OTIC MISC."
"879900"="OTIC COMBINATIONS"
"879910"="OTIC STEROID COMBINATIONS"
"879920"="OTIC ANALGESIC COMBINATIONS"
"879930"="OTIC ANTIFUNGAL COMBINATIONS"
"880000"="MOUTH - THROAT (LOCAL)"
"881000"="ANTIINFECTIVES - THROAT"
"881099"="MISC. ANTIINFECTIVES - THROAT"
"881500"="ANTISEPTICS - MOUNT/THROAT"
"881599"="ANTISEPTIC COMBINATIONS - MOUTH/THROAT"
"882000"="LOZENGES"
"825000"="STEROIDS - MOUTH"
"883000"="MOUTHWASHES"
"883500"="ANESTHETICS, TOPICAL ORAL"
"883599"="ANESTHETICS, TOPICAL ORAL - COMBOS 8"
"884000"="DENTAL PRODUCTS"
"884010"="FLUORIDE DENTAL RINSE"
"884020"="FLUORIDE DENTAL GEL"
"884030"="FLUORIDE TOOTHPASTE"
"885000"="MISC. THROAT PRODUCTS"
"885010"="ARTIFICAL SALIVA"
"885020"="PROTECTANTS"
"890000"="ANORECTAL"
"891000"="RECTAL STEROIDS"
"891500"="INTRARECTAL STEROIDS"
"892000"="RECTAL LOCAL ANESTHETICS"
"893000"="MISC. RECTAL PRODUCTS"
"894000"="RECTAL PROTECTANTS - EMOLLIENTS"
"899900"="RECTAL COMBINATIONS"
"889910"="RECTAL ANESTHETIC/STEROIDS"
"899920"="RECTAL ANESTHETIC COMBINATIONS"
"899930"="RECTAL STEROID COMBINATIONS"
"899940"="MISC. RECTAL COMBINATIONS"
"900000"="DERMATOLOGICAL"
"900500"="ACNE PRODUCTS"
"900510"="ACNE ANTIBIOTICS"
"900520"="ACNE CLEANSERS"

"900599"="ACNE COMBINATIONS"
"900700"="ANALGESICS"
"901000"="ANTIBIOTICS - TOPICAL"
"991098"="ANTIBIOTIC MIXTURES TOPICAL"
"901099"="ANTIBIOTIC STEROID COMBINATIONS"
"901500"="ANTIFUNGALS - TOPICAL"
"901599"="ANTIFUNGALS - TOPICAL COMBINATIONS"
"902000"="ANTIHISTAMINES-TOPICAL"
"902099"="ANTIHISTAMINES - TOPICAL COMBINATIONS"
"902100"="ANTIINFLAMMATORY AGENTS"
"902200"="ANTIPRURTICS"
"902299"="ANTIPRURTICS - COMBINATIONS"
"902500"="ANTIPSORATICS"
"902510"="ANTIPSORATIC, TAR CONTAINING"
"902599"="ANTIPSORATIC COMBINATIONS"
"903000"="ANTISEBORRHEIC PRODUCTS"
"903099"="ANTISEBORRHEIC COMBINATIONS"
"903500"="ANTIVIRAL - TOPICAL"
"904000"="BATH PRODUCTS"
"904500"="BURN PRODUCTS"
"905000"="CAUTERIZING AGENTS"
"905099"="CAUTERIZING AGENT COMBINATIONS"
"905200"="TAR PRODUCTS"
"905299"="TAR COMBINATIONS"
"905500"="CORTICOSTEROIDS - TOPICAL"
"905598"="STEROID-LOCAL ANESTHETICS"
"905599"="TOPICAL STEROID COMBINATIONS"
"906000"="DIAPER RASH PRODUCTS"
"906500"="EMOLLIENTS"
"906599"="EMOLLIENT COMBINATIONS"
"907000"="ENZYMES - TOPICAL"
"907099"="ENZYME MIXTURES - TOPICAL"
"907500"="KERATOLYTICS"
"907599"="KERATOLYTIC COMBINATIONS"
"908000"="LIMINENTS"
"908500"="LOCAL ANESTHETICS - TOPICAL"
"908510"="TOPICAL ANESTHETIC GASSES"
"908599"="TOPICAL ANESTHETIC COMBINATIONS"
"908700"="PIGMENTING-DEPIGMENTING AGENTS"
"908710"="PIGMENTING AGENTS"
"908720"="DEPIGMENTING AGENTS"
"909000"="SCABICIDES & PEDICULOCIDES"
"909099"="SCABICIDE COMBINATIONS"
"909200"="SUNSCREENS"
"909500"="POISON IVY PRODUCTS"
"909700"="MISC. TOPICAL"
"909710"="ASTRINGENTS"
"909720"="SKIN PROTECTANTS"
"909730"="SOAPS"
"909740"="SHAMPOOS"
"909750"="POWDERS"
"909760"="SKIN OILS"
"909770"="LUBRICANTS"
"909800"="PODIATRIC PRODUCTS"
"909900"="MISC. DERMATOLOGICAL PRODUCTS"
"910000"="R E S E R V E D"

GROUPS 92-99 MISCELLANEOUS PRODUCTS

"920000"="ANTISEPTICS & DISINFECTANTS"
"921000"="CHLORINE ANTISEPTICS"
"921099"="CHLORINE ANTISEPTIC COMBINATIONS"
"922000"="IODINE ANTISEPTICS"
"922099"="IODINE ANTISEPTIC COMBINATIONS"
"923000"="MERCURY ANTISEPTICS"
"924000"="SILVER ANTISEPTICS"
"929900"="ANTISEPTIC COMBINATIONS"
"930000"="ANTIDOTES"
"931000"="CHELATING AGENTS"
"939900"="ANTIDOTE KITS"
"940000"="DIAGNOSTIC PRODUCTS"
"941000"="DIAGNOSTIC REAGANTS"
"941010"="INFECTION TESTS"
"941075"="CONTROL REAGENTS"
"941099"="MULTIPLE URINE TESTS"
"942000"="DIAGNOSTIC DRUGS"
"943000"="DIAGNOSTIC BIOLOGICALS"
"943099"="MULTIPLE SKIN TESTS"
"944000"="RADIOGRAPHIC CONTRAST MEDIA"
"944010"="BARIUM"
"944020"="IODINATED"
"945000"="NON-RADIOGRAPHIC CONTRAST MEDIA"
"946000"="DIAGNOSTIC PRODUCTS, MISC."
"950000"="R E S E R V E D"
"960000"="CHEMICALS"
"961000"="ACIDS, BASES, & BUFFERS"
"961010"="ACIDS"
"961020"="BASES"
"961030"="BUFFERS"
"962000"="LIQUIDS"
"962010"="SOLVENTS"
"962020"="FIXED OILS"
"962025"="ESSENTIAL OILS"
"963000"="SOLIDS"
"963099"="SOLID COMBINATIONS"
"964000"="SEMI-SOLIDS"
"970000"="MEDICAL DEVICES"
"970500"="PARENTERAL THERAPY SUPPLIES"
"970510"="NEEDLES & SYRINGES"
"970520"="IV SETS/TUBING"
"970530"="BLOOD ADMINISTRATION SETS"
"970540"="INFUSION PUMPS"
"971000"="RESPIRATORY THERAPY SUPPLIES"
"971010"="NEBULIZERS"
"971020"="HUMIDIFIERS"
"971200"="RESPIRATORY AIDS"
"971210"="MASKS"
"971500"="GI-GU OSTOMY - IRRIGATION SUPPLIES"
"971505"="CATHETERS"
"971510"="OSTOMY SUPPLIES"
"971520"="INCONTENENTENCE SUPPLIES"
"971525"="IRRIGATION - TYPE SYRINGES"
"971530"="URINARY DRAINAGE & IRRIGATION SUPPLIES"
"971700"="PERITONEAL DIALYSIS"
"972000"="DIABETIC SUPPLIES"
"972010"="INSULIN ADMINISTRATION SUPPLIES"

"972020"="GLUCOSE MONITORING TEST SUPPLIES"
"972500"="ENTERAL NUTRITION SUPPLIES"
"972510"="FEEDING TUBES"
"973000"="BANDAGES - DRESSINGS - TAPE"
"973010"="ADHESIVE BANDAGES"
"973020"="GAUZE BANDAGES"
"973030"="GAUZE PADS & DRESSINGS"
"973040"="ADHESIVE TAPE"
"973500"="ELASTIC BANDAGES - SUPPORTS"
"973700"="HEATING AIDS"
"973710"="HEATING PADS"
"973720"="HOT PACKS"
"973800"="COOLING AIDS"
"973810"="COLD PACKS"
"973900"="BACK PLASTERS"
"974000"="CONTRACEPTIVES"
"974010"="CONDOMS"
"974020"="DIAPHRAGMS"
"974030"="IUD'S"
"974040"="CONTRACEPTIVE SPONGE"
"974500"="FEMALE PERSONAL CARE PRODUCTS"
"974510"="SANITARY NAPKINS & TAMPONS"
"974520"="DOUCHE SUPPLIES"
"975000"="ORAL HYGIENE PRODUCTS"
"975005"="DENTAL SUPPLIES"
"975010"="DENTURE CARE PRODUCTS"
"975020"="TOOTHBRUSHES - FLOSS"
"975030"="DENTIFRICES"
"975500"="INFANT CARE PRODUCTS"
"975510"="FEEDING SUPPLIES"
"975520"="DIAPERS"
"975530"="NURSING PADS"
"976000"="OPTICAL SUPPLIES"
"976010"="CONTACT LENS CARE SUPPLIES"
"976020"="EYEGLASS CARE SUPPLIES"
"976030"="EYE PATCHES"
"976500"="DURABLE MEDICAL EQUIPMENT"
"977000"="MISC. DEVICES"
"977010"="THERMOMETERS"
"977020"="DISPOSABLE GLOVES"
"977030"="APPLICATORS, COTTON BALLS, ETC."
"977040"="RUBBER GOODS"
"977070"="RAZORS AND BLADES"
"977080"="SPONGES"
"978000"="FOOT CARE PRODUCTS"
"978500"="FIRST AID KITS"
"980000"="PHARMACEUTICAL ADJUVANTS"
"981000"="ANITMICROBIAL AGENTS"
"982000"="ANTIOXIDANTS"
"983000"="COLORING AGENTS"
"983500"="PHARMACEUTICAL EXCIPIENTS"
"983510"="EXTERNAL VEHICLE INGREDIENTS"
"984000"="LIQUID VEHICLE"
"984010"="PARENTERAL VEHICLES"
"984020"="ORAL VEHICLES"
"984030"="EXTERNAL VEHICLES"
"985000"="PRESERVATIVES, OTHER"
"986000"="SEMISOLID VEHICLE"

"990000"="UNCLASSIFIED"
"991000"="CARDIOPLEGIC SOLUTION"
"992000"="CHELATING AGENTS"
"993000"="COLLAGEN IMPLANT"
"993500"="ENZYMES"
"994000"="IMMUNOSUPPRESSIVE AGENTS"
"994500"="K REMOVING RESIN"
"995000"="PROSTAGLANDINS"
"996500"="SCLEROSING AGENTS"
"997000"="PERITONEAL DIALYSIS SOLUTIONS"
"997500"="IRRIGATION SOLUTIONS"
"998000"="ORGAN PRESERVATION SOLUTION"
"998500"="MISC. NATURAL PRODUCTS"
"999000"="NOT CLASSIFIED"
"999030"="UNCLASSIFIED OTC PRODUCT"
"$$$$$$" = "NON-MEDICATIONS" ;

Date Last Changed: 06/01/95