Circulation
Cardiovascular Quality and Outcomes
JOURNAL OF THE AMERICAN HEART ASSOCIATION
American Heart Association
Learn and Live

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Circ Cardiovasc Qual Outcomes published online Feb 10, 2010;
DOI: 10.1161/CIRCOUTCOMES.109.915538
Circulation: Cardiovascular Quality and Outcomes is published by the American Heart Association. 7272 Greenville Avenue, Dallas, TX 72514
 Print ISSN: 1941-7705. Online ISSN: 1941-7713

Twelve-Year Follow-Up of American Women's Awareness of Cardiovascular Disease Risk and Barriers to Heart Health

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Background—Awareness of cardiovascular disease (CVD) risk has been linked to taking preventive action in women. The purpose of this study was to assess contemporary awareness of CVD risk and barriers to prevention in a nationally representative sample of women and to evaluate trends since 1997 from similar triennial surveys.

Methods and Results—A standardized survey about awareness of CVD risk was completed in 2009 by 1142 women ≥25 years of age, contacted through random digit dialing oversampled for racial/ethnic minorities, and by 1158 women contacted online. There was a significant increase in the proportion of women aware that CVD is the leading cause of death since 1997 (*P* for trend=<0.0001). Awareness among telephone participants was greater in 2009 compared with 1997 (54% versus 30%, *P*<0.0001) but not different from 2006 (57%). In multivariate analysis, African American and Hispanic women were significantly less aware than white women, although the gap has narrowed since 1997. Only 53% of women said they would call 9-1-1 if they thought they were having symptoms of a heart attack. The majority of women cited therapies to prevent CVD that are not evidence-based. Common barriers to prevention were family/caretaking responsibilities (51%) and confusion in the media (42%). Community-level changes women thought would be helpful were access to healthy foods (91%), public recreation facilities (80%), and nutrition information in restaurants (79%).

Conclusions—Awareness of CVD as the leading cause of death among women has nearly doubled since 1997 but is stabilizing and continues to lag in racial/ethnic minorities. Numerous misperceptions and barriers to prevention persist and women strongly favored environmental approaches to facilitate preventive action. **(*Circ Cardiovasc Qual Outcomes*. 2010;3:00-00.)**

Key Words: cardiovascular disease ■ prevention ■ women

American women continue to die of heart disease and stroke at a rate unparalleled by other diseases.[1] The last decade has witnessed intensive public efforts to educate women about their risk of heart disease, and a recent national survey documented that awareness of heart disease among women nearly doubled in 10 years.[2] Despite the progress, there remains a persistent racial and ethnic minority gap in awareness.[2] Recent research has demonstrated a positive correlation between awareness that cardiovascular disease (CVD) is the leading cause of death in women and recent action(s) taken to reduce CVD risk.[3] These data suggest that continued educational campaigns, particularly those targeted to the highest-risk subgroups, could be important in reducing the burden of CVD among women.

Beginning in 1997, the American Heart Association (AHA) has conducted triennial surveys in random samples of women to track their awareness, knowledge, and perceptions related to heart disease and stroke according to race/ethnicity and age. The purpose of the present study was to assess the current level of awareness, knowledge, and perceptions in a nationally representative sample including an oversampling of black, Hispanic, and Asian women and to examine trends over time. An additional goal was to explore barriers to women taking preventive action.

Methods

Study Population and Survey Administration

We conducted a cross-sectional survey of 2300 women in the United States who were at least 25 years of age to assess their awareness, knowledge, and perceptions of CVD risk and prevention. The study was designed to result in a margin of error of approximately 2.0%. Survey data were compared with results from similar surveys conducted in 1997, 2000, 2003, and 2006[2,4–6] to examine trends in these parameters. In addition, characteristics of women surveyed by random digital dialing were compared with those of women surveyed online to develop a comparative framework for future online studies.

Potential participants were identified through 2 independent mechanisms: random-digit dialing (n=1142) similar to our previous surveys[2,4–6] and a new online survey approach (n=1158). All surveys were conducted between July 1, 2009, and August 21, 2009, by representatives of Harris Interactive, New York, NY (telephone interviews) or via an online survey conducted through Harris Poll Online, a multimillion member panel of cooperative online respondents maintained by Harris Interactive. Both the telephone and

Received October 9, 2009; accepted December 16, 2009.

From Columbia University Medical Center (L.M., H.M.-G.), New York, NY; Duke Clinical Research Institute (R.J.D., L.K.N.), Durham, NC; and the American Heart Association (K.J.R.), Dallas, Tex.

The online-only Data Supplement is available with this article at http://circoutcomes.ahajournals.org/cgi/content/full/CIRCOUTCOMES.109.915538/DC1.

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online surveys consisted of the same 21 unique questions; 11 additional questions about health behaviors and changes were asked on the online survey. Both telephone and online surveys were administered in English and took approximately 18 minutes to complete.

WHAT IS KNOWN

- Awareness of heart disease as the leading cause of death among women is suboptimal and a gap in awareness exists between whites and racial/ethnic minorities.
- It is well established that delay in seeking emergency services is associated with greater cardiac mortality rates.
- Clinical trials have demonstrated that some interventions (eg, antioxidant vitamin supplementation) do not prevent heart disease.
- Environmental factors (such as limited availability of fresh fruits and vegetables, have been cited as barriers to heart-healthy living.

WHAT THE STUDY ADDS

- Although levels of heart disease awareness have improved since 1997, almost half of women remain unaware that coronary heart disease is the leading cause of death among women, and the gap in awareness among minorities is closing.
- The present study documents that only about one half of women would call 9-1-1 if they thought they were having symptoms of a heart attack.
- A substantial percentage of women perceive that unproven preventive therapies will reduce their risk of heart disease.
- Women support environmental approaches such as increased access to healthy foods, recreational facilities, and enhanced nutrition labeling to lower risk.

Data were weighted based on age, race, education, income, and region to reflect the composition of the US population of women age 25 and older who speak English based on information from the US Census Bureau's March 2008 Current Population Survey overall and within ethnic strata. Propensity weighting was used for the online survey to adjust for the respondents' propensity to be online.

Using random-digit dialing, a total of 161 902 numbers were called. Of these, 48 625 (30%) were nonworking or government numbers, 5320 (3%) were unable to be completed due to privacy management equipment, and an additional 68 949 (43%) calls were unresolved due to the inability to talk directly with a person. Of the 39 008 calls successfully connected, a total of 19 464 were answered by individuals who declined to speak to an interviewer (50% refusal rate). An additional 3688 calls (9%) were not completed because of language barriers, and 6473 (17%) asked to be called back for an interview (5% of whom scheduled a specific call-back time). Screening interviews were completed in 9383 calls, with 4177 (45% of screened individuals) not eligible to participate either because of no woman ≥25 years of age in the household or refusal to allow contact with a woman ≥25 years of age in the household. Of the 5206 women who met criteria for participation, 1142 (22%) completed the survey.

An e-mail invitation was sent to 22 426 women members of Harris Poll Online. Harris Poll Online includes several million members invited from multiple sources to ensure a representative sample. Diverse methods are used to recruit panelists including: targeted e-mail and postal mail invitations, TV advertisements, and telephone recruitment.

Of these, 3660 (16%) were undeliverable, and, of the 1622 who opened the survey link, 222 did not complete the screening section and 79 (5%) did not meet eligibility criteria. Of the 1158 women who were qualified, all 1158 (100%) completed the survey. The complete survey is available in the online-only Data Supplement. All telephone and online participants were asked about demographic information followed by open-ended questions regarding leading cause of death in women and the single greatest health problem facing women. These questions replicated methods and sampling in previous AHA surveys of women's awareness.[2,4–6] In 2009, new questions on caregiving responsibilities and the burden and impact on their health were added. Only the online respondents were given questions about reasons for improving their own health, preventive actions they have taken in the past year, and barriers to incorporating healthy lifestyle behaviors. If someone refused or did not know an answer, the response was coded as "not sure" or "decline to answer," and these percentages are not excluded from the analysis. In the online survey, respondents were not able to move to the next question before providing an answer to the current question.

Statistical Methods

Descriptive statistics generated for baseline characteristics and survey responses are presented as proportions. Univariate relationships of responses between each racial/ethnic and age group as well as online versus telephone surveys were analyzed using *t* tests with software designed for marketing research (Quantum, SPSS, Chicago, Ill). A trend analysis was conducted using linear regression to evaluate women's awareness across all survey years. Statistical significance was declared for $P<0.05$. No adjustments were made for multiple comparisons.

Results

Characteristics of Respondents

The demographic and clinical characteristics of telephone respondents (n=1142) are listed in Table 1, overall and by race/ethnicity. Characteristics including education level did not differ from those of respondents who completed the first survey in 1997, except that 2009 participants were less likely to be 25 to 44 years of age (37% versus 47%), more likely to be married/cohabitating (64% versus 59%), and more likely to have a household income ≥100 000 (18% versus 5%). Survey results for demographic and clinical characteristics of online respondents (n=1158) are also included in Table 1 and do not materially differ from telephone results except that online responders were less likely to be in the 45- to 55-year age range or have less than a high school education. Unless otherwise noted, the results that follow are from telephone respondents only, to allow comparison to results from previous survey years with similar methodology.

Awareness of and Perceptions Related to Heart Disease

The Figure illustrates trends in awareness of the leading cause of death among women surveyed from 1997 to 2009. In 2009, 54% of respondents correctly identified heart disease/heart attack as the leading cause of death among women. This was significantly higher than 1997 (30%; *P* for trend=<.0001) but not significantly different from the proportion aware in the survey administered in 2006 (57%; $P=0.28$). A majority of women surveyed online (65%) also correctly identified heart disease/heart attack as the leading cause of death.

Table 1. Demographic Characteristics of Respondents in the 2009 AHA Women's Health Survey

Characteristic	All		Race/Ethnic Group Telephone Respondents*				
	On-Line (n=1158)	Telephone† (n=1142)	White (n=660) [a]	Black (n=128) [b]	Hispanic (n=200) [c]	Asian (n=125) [d]	Other (n=29) [e]
Age, y							
25–34	16	18	16	16	25[a]	20	26
35–44	23	19	18	24	20	27[a]	16
45–54	19	24†	24	19	28	21	33
55–64	20	18	18	19	15	18	19
≥65	21	21	24[c,d]	21	13	14	5
Marital status							
Single, never married	15	12	7	29[a,c]	16[a]	17[a]	41
Married/cohabitating	67	64	71[b,c]	35	55[b]	67[b]	47
Separated/divorced	12	12	12	17	15	9	8
Widowed	6	11	10	16[d]	13[d]	4	3
Education							
≤Some high school	5	9†	7	16[a,d]	14[a,d]	5	18
High school graduate	38	33	33[d]	32[d]	39[d]	12	38
Some college	17	19	18	22	17	16	18
2-Year college graduate	9	9	10	5	7	7	2
4-Year college graduate	19	19	20	13	14	34[a,b,c]	18
Postgraduate study	12	12	11	12	10	26[a,b,c]	5
Household income, $							
<25 000	17	18	14	30[a,d]	23[a,d]	11	37
<25 000 to 49 999	20	18	18	23	22	14	6
<50 000 to 99 999	27	25	25	23	24	26	28
≥100 000	18	18	20[b,c]	10	12	25[b,c]	18
Refused	17	21	23	14	20	24	11
Personal history of disease							
Diabetes	10	14	12	21[a,d]	18[d]	6	9
Heart attack	4	4	3	5	3	3	3
Stroke	2	5†	5	5	4	2	2

*Telephone results are presented for comparability with previously published survey results.

All values are weighted percentages. †Significant differences between online and telephone survey responses. Superscript letters denote significant differences at $P<0.05$ between racial/ethnic groups.

Awareness that heart disease/heart attack is the leading cause of death has approximately doubled among white and Hispanic women and tripled among black women between the first survey in 1997 and the current 2009 survey. However a racial/ethnic disparity remains in the proportion aware by race/ethnic group (Table 2). In multivariate analysis adjusting for age and education level, African American, Hispanic, and Asian women were significantly less likely to be aware that heart disease/heart attack is the leading cause of death, compared with white women.

There were no differences in awareness of the leading cause of death in women by age group (Table 3). This differs from results from all previous survey years including 1997 in which younger women were significantly less aware compared with women in older age groups that heart disease/heart attack is the leading cause of death in women.[4] Women 25 to 34 years of age were more likely than women ≥65 years of age to cite breast cancer as the greatest health problem facing women today (34% versus 22%; $P<0.05$).

Knowledge of Heart Disease

Forty-five percent of women surveyed in 2009 considered themselves to be very well or well informed about heart disease in women compared with 34% in 1997. Knowledge of heart attack warning signs did not appreciably differ from 1997.[4] Fifty-six percent of women cited chest pain and neck, shoulder, and arm pain, 29% identified shortness of breath, and 17%, 15%, and 7% recognized chest tightness, nausea, and fatigue, respectively, as heart attack warning signs. When asked what they would do if they thought they were having signs of a heart attack, 53% of women reported that they would call 9-1-1 and 23% reported they would take an aspirin.

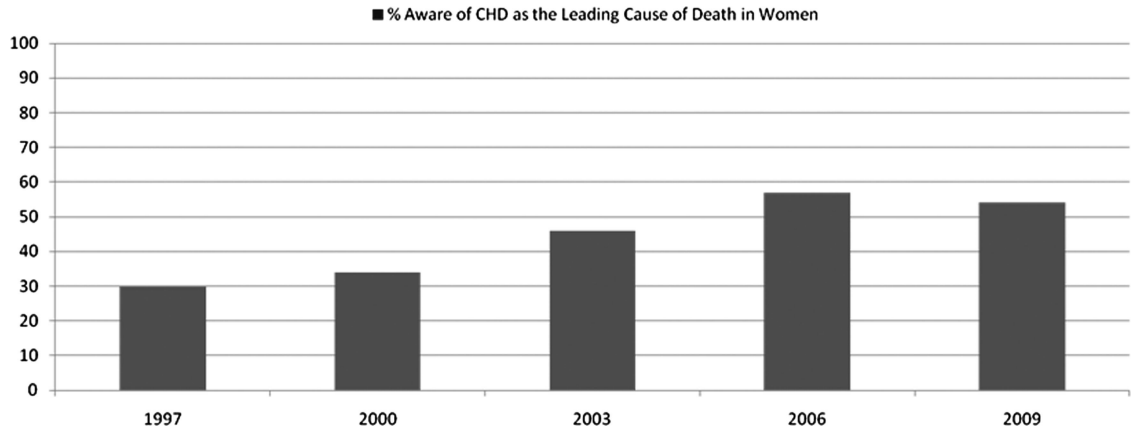

Figure. Overall trends in awareness that coronary heart disease is the leading cause of death in women.

Perceived Heart Disease Risk Factors and Prevention Strategies

As in previous years, most participants recognized that lifestyle behaviors can prevent or reduce the risk of getting heart disease. Routine use of fish oil/omega-3 fatty acids (82%) and aspirin (78%) were also listed as top prevention strategies (Table 4). The proportion citing hormone replacement therapy as a prevention strategy was significantly less than in 1997 (19% versus 47%).[4]

Sources of Information About Heart Disease

More than 85% of women reported that they had seen, heard, or read about women and heart disease in the past 12 months. These women were more likely to be aware that heart disease is the leading cause of death in women compared with their counterparts (58% versus 25%; $P<0.0001$). Women who had seen, heard, or read anything about the "red dress" symbol were more aware that heart disease is the leading cause of death in women compared with those who were not familiar with the "red dress" symbol (68% versus 43%; $P<0.0001$).

In 2009, more women reported television as their source of information about heart disease (45%) compared with magazines (32%), the newspaper (18%), or the Internet (14%). Additionally, 48% of women reported discussing heart disease with their doctor, an increase from 30% in 1997.

Caregiving and Preventive Action

Current caregiving (ie, providing care to an adult family member or friend) was reported by 29% of telephone respondents and 24% of women who completed the online survey. Among current caregivers, more than half reported spending 6 or more hours per week caregiving. When current caregivers were asked how they felt caregiving responsibilities have

Table 2. Awareness of Leading Cause of Death for Women and Perceived Greatest Health Problem Facing Women by Ethnic Group in 2009 Versus 1997

		Race/Ethnic Group*									
		White [a]			Black [b]			Hispanic [c]			Asian [d]
Response (Unaided)	Overall 2009	2009	1997	*P*†	2009	1997	*P*†	2009	1997	*P*†	2009
Leading cause of death											
Breast cancer	11	10	14	0.08	16	18	0.73	14	17	0.56	7
Cancer (general)	23	20	33	<0.001	32[a]	41	0.22	25	43[a]	0.009	38
Heart disease/heart attack	54	60[b,c,d]	33[b,c]	<0.001	43	15	<0.001	44	20	<0.001	34
Other	4	3	8	0.002	3	12	0.02	7[a]	9	0.61	12[a,b]
Don't know/no answer	8	7	12	0.01	6	14	0.08	10	11	0.82	18[a,b]
Greatest health problem											
Breast cancer	28	25	34	0.005	32	38	0.41	31	34	0.66	25
Cancer (general)	18	18	27	0.002	19	28	0.16	24	25	0.87	17
Heart disease/heart attack	16	19[c]	8	<0.001	12	6	0.17	8	9	0.80	19[c]
Obesity	8	8	. . .	. . .	7	n/a	. . .	10	. . .	. . .	12
Other	20	20	16	0.14	20	15	0.39	18	16	0.71	13
Don't know/no answer	9	8	15	0.002	9	13	0.40	10	16	0.22	14

*Telephone results are presented for comparability between 1997 and 2009 surveys.

†*P* values for tests of proportion between 1997 and 2009 telephone survey results. Ellipses indicate response not surveyed in 1997. All values are weighted percentages. Superscript letters denote significant differences at $P<0.05$ between racial/ethnic groups.

Table 3. 2009 Awareness of Leading Cause of Death for Women and Perceived Greatest Health Problem Facing Women by Age Among Telephone Respondents

	Age 25–34 y[a]			Age 35–44 y[b]			Age 45–64 y[c]			Age ≥65 y[d]		
Response (Unaided)	2009 (n=127)	1997 (n=188)	*P*	2009 (n=159)	1997 (n=294)	*P*	2009 (n=517)	1997 (n=308)	*P*	2009 (n=338)	1997 (n=195)	*P*
Leading cause of death												
Breast cancer	14	19[c,d]	0.37	10	17[d]	0.10	12	12	0.99	7	9	0.47
Cancer (general)	27	38	0.12	18	33	0.006	24	36	0.004	24	34	0.03
Heart disease/heart attack	50	16	<0.001	59	28[a]	<0.001	53	38[a,b]	0.001	54	34[a]	<0.001
Other	2	12	0.009	6	10	0.24	4	7	0.14	5	9	0.12
Don't know/no answer	7	15[c]	0.09	7	12[c]	0.17	8	7	0.68	11	14[c]	0.38
Greatest health problem												
Breast cancer	34[d]	41[d]	0.34	29	40[d]	0.06	28	34[d]	0.15	22	20	0.64
Cancer (general)	9	19	0.05	15	26	0.03	21[a]	26	0.19	26[a,b]	37[a,b,c]	0.02
Heart disease/heart attack	12	4	0.05	20	5	<0.001	17	11[a,b]	0.06	15	8	0.04
Obesity	9	. . .	. . .	7	. . .	. . .	8	. . .	. . .	8	. . .	. . .
Other	29[c,d]	13	0.01	21	16	0.29	18	19	0.78	15	17	0.60
Don't know/no answer	7	23[b,c]	0.003	9	13	0.30	7	10	0.23	14[c]	18[c]	0.29

Telephone results are presented for comparability between 1997 and 2009 surveys.

All values are weighted percentages. Superscript letters denote significant differences at $P<0.05$ between age groups. *P* values are for tests of proportion between 1997 and 2009. Ellipses indicate response not surveyed in 1997.

affected their heath, 22% of telephone respondents and 31% of online respondents reported a negative health impact. Among those reporting a negative impact, the primary ways caregiving negatively affected their health were (1) increased stress, (2) more exhaustion, (3) less time for one's self, (4) trouble sleeping, and (5) not enough time to spend with other friends/family members.

Preventive Actions Taken in the Past Year

Preventive actions taken in the past year are presented in Table 5. Checking blood pressure (84%), trying to better manage stress (74%), and going to see a doctor or other health care professional (73%) were the top 3 preventive actions reported. Women 50 years of age and older were significantly more likely to take these preventive actions as well as to decrease consumption of unhealthy foods, have blood cholesterol levels checked, start taking vitamins or dietary supplements, quit using tobacco, or get a diagnostic test for heart disease compared with women under 50 years of age ($P<0.001$ for all comparisons). When asked what prompted them to take preventive actions, a majority of women responded that they wanted to improve their health and feel better (Table 5). Compared with younger women, those ≥50 years of age were more likely to be prompted to take action because they wanted to live longer, because they read, saw, or heard information related to heart disease, or because they had symptoms related to heart disease. Hispanic women were more likely than African American, Asian, or white women to report that they took preventive actions for their family (38% versus 19%, 19%, and 20%, respectively; $P<0.05$).

Table 4. Perception of Select Heart Disease Prevention Strategies

	All Subjects*		
Response (Aided)	2009 (n=1142)	1997 (n=1000)	*P* Value 2009 vs 1997
Getting adequate sleep	94	…	…
Fish oil/omega-3 fatty acids	82	…	…
Take aspirin regularly	78	…	…
Fiber	75	…	…
Praying or meditating	74	…	…
Preventing gum disease	74	…	…
Antioxidants	70	…	…
Multivitamin	69	50	<0.001
Special vitamins (eg, A, C, E)	58	59	0.72
Aromatherapy	29	22	0.005
Plant stanols and sterols	24	…	…
Hormone therapy	19	47	<0.001

*All values are weighted percentages of telephone respondents who believe each activity can prevent or reduce the risk of getting heart disease. Ellipses indicate response not surveyed in 1997.

Barriers to Preventive Action

Top barriers to taking preventive action included family/caregiving responsibilities (51%) and too much confusion in the media about what to do (42%) (Table 6). There were no differences in barriers to preventive action reported by race/ethnic group except that white women and Asian women were more likely than African American and Hispanic women to report that there is too much confusion in the media. African American women were more likely than Asian, Hispanic, or white women to agree that God or some higher power ultimately determines their health.

Online respondents were given a list of environmental/community level changes and asked whether they thought each one would be helpful or not helpful in leading them to

Table 5. Preventive Actions Taken in the Past Year According to Race/Ethnicity and Age Group

Preventive Action (Aided)	Overall (n=1158)	White (n=634)	Nonwhite	*P**	Age <50 y (n=683)	Age >50 y (n=475)	*P**
Had blood pressure checked	84	85	82	0.32	72	97	<0.001
Tried to better manage stress	74	74	73	0.78	67	82	<0.001
Went to see a doctor or other health care professional	73	74	71	0.41	60	87	<0.001
Decreased consumption of unhealthy foods	71	74	65	0.02	64	79	<0.001
Had cholesterol checked	66	68	63	0.20	47	87	<0.001
Increased physical activity	63	63	63	0.99	61	65	0.33
Started taking vitamins or dietary supplements	56	58	53	0.22	46	68	<0.001
Lost weight	51	51	53	0.63	50	53	0.48
Quit smoking/using tobacco products	29	25	38	<0.001	16	44	<0.001
Got a diagnostic test for heart disease such as a stress test or heart scan	26	26	26	0.99	12	42	<0.001
Prompt to take preventive action (aided)							
I wanted to improve my health	71	70	75	0.18	71	72	0.79
I wanted to feel better	63	62	64	0.61	64	61	0.46
I wanted to live longer	53	54	51	0.46	44	62	<0.001
I wanted to avoid taking medications	29	27	33	0.11	26	31	0.19
My healthcare provider encouraged me to	28	30	23	0.06	17	38	<0.001
I did it for my family	22	20	27	0.04	23	21	0.57
A family member/relative developed heart disease, got sick, or died	17	16	18	0.51	18	16	0.53
Saw/heard/read information related to heart disease	17	17	17	0.99	10	24	<0.001
I experienced symptoms related to heart disease	15	15	16	0.74	12	19	0.02
A family member encouraged me to	7	7	8	0.64	8	7	0.65
A friend developed heart disease, got sick, or died	2	2	2	0.99	1	3	0.09
A friend encouraged me to	2	2	3	0.42	4	1	0.02

Values represent the weighed percent of women surveyed online who reported taking each preventive action to improve her health in the past year.
**P* value for difference in proportion by race/ethnic group or by age group.

follow a more heart-healthy lifestyle. A response of "helpful" was given by 91% of participants for access to better fruits, vegetables, and other healthy foods, 80% for greater access to indoor and outdoor public recreation facilities, 79% for requiring all restaurants to post nutrition information for menu items, 75% for smoking bans, 74% for stricter regulations on pollution, 73% for bans on trans fats in restaurants, and 62% for increased public safety in public recreation areas.

Discussion

Current data suggest that the level of awareness of heart disease as a leading cause of death among women has nearly doubled since 1997 and has remained steady for 3 years. Awareness among racial and ethnic minorities has significantly increased (though remains lower compared with whites), whereas the awareness gap among younger versus older women has narrowed. These data support the success of national educational programs to raise awareness of heart disease risk among women and highlight the need to sustain efforts to raise awareness, particularly among racial/ethnic minorities and young women, in whom the majority of women are unaware. In addition, programs to assist women in taking action steps to lower their risk may be prudent, given the substantial increased awareness that appears to have reached a plateau.

The finding that awareness among racial and ethnic minorities lags behind white women is consistent with several other studies that showed demographics and acculturation status was significantly associated with awareness and knowledge of CVD.[7–11] African American women have a significantly higher rate of CVD compared with Caucasian women, yet their rate of awareness was substantially lower. This may impede risk reduction efforts because awareness of CVD has been linked to preventive action.[6] In the current study, Asian women had the lowest rate of awareness of CVD risk; however, the sample size within subpopulations was small, so definitive conclusion cannot be drawn. Heart disease is now the leading cause of death in Chinese women, and rates of awareness are low.[10] A recent study showed that Chinese-Canadians were less likely to receive heart disease education compared with other ethnic groups.[12] In addition, less acculturated minorities have health beliefs that might impede prevention; these findings suggest that providers and public campaigns should be more aggressive in reaching out to racial and ethnic minorities.[11]

Of concern was the finding that only 53% of women stated they would call 9-1-1 if they thought they were having

Table 6. Barriers to Living a Heart-Healthy Lifestyle by Race/Ethnicity and Age Group

Barriers (Aided)	Overall (n=1158)	White (n=634)	Nonwhite (n=524)	P*	Age <50 y (n=683)	Age >50 y (n=475)	P*
I have family obligations and other people to take care of	51	53	45	0.05	51	50	0.81
There is too much confusion in the media about what to do	42	44	36	0.048	43	41	0.63
God or some higher power ultimately determines my health	37	35	44	0.02	33	42	0.03
I am not confident that I can successfully change my behavior	33	33	34	0.80	36	30	0.13
I do not have the money or insurance coverage to do what needs to be done	32	31	35	0.30	35	29	0.13
I do not perceive myself to be at risk for heart disease	32	33	30	0.43	36	28	0.04
I am to stressed to do the things that need to be done	28	28	27	0.79	33	21	0.002
I do not want to change my lifestyle	28	30	25	0.18	32	24	0.04
My health care professional does not think I need to worry about heart disease	27	26	28	0.58	29	24	0.18
I do not have time to take care of myself	25	24	27	0.40	33	15	<0.001
I do not know what I should do	25	24	27	0.40	30	20	0.007
I am fearful of change	22	22	20	0.55	25	18	0.04
I am confused by what I am supposed to do to change my lifestyle	21	22	18	0.23	24	17	0.04
I feel the changes required are too complicated	20	20	22	0.55	23	17	0.08
My health care professional does not explain clearly what I should do	19	18	21	0.35	21	17	0.23
My friends/family have told me that I do not need to change	16	17	15	0.51	18	15	0.34
I do not think changing my behavior will reduce my risk of developing heart disease	13	14	10	0.15	12	14	0.48
I am too ill/old to make changes	8	8	8	0.99	6	10	0.08
My health care professional does not speak my language	8	8	9	0.66	9	8	0.67

Values represent the weighted percent of women surveyed online who strongly or somewhat agreed that they experienced each barrier to living a heart healthy lifestyle.

*P value for difference in proportion by race/ethnic group or by age group.

symptoms of a heart attack, and awareness of atypical symptoms of heart disease was low. There has been an emphasis on raising awareness of the range of symptoms of heart disease in women over the past decade.[13] Women have been shown to have a significant time delay in receiving diagnostic and interventional procedures, which may contribute to a worse 30-day mortality rate compared with men.[14,15] Educating women about early symptom recognition and calling 9-1-1 sooner may be an important strategy to reduce disparities in outcomes.

Notable in the current survey was the finding that a majority of women perceived that several unproven methods would reduce risk of heart disease, including use of multivitamins, antioxidants, and special vitamins (eg, vitamin C). This is a concern because recent randomized clinical trials showed no benefit of antioxidant vitamins in women.[16] The AHA 2007 Evidence-Based Guidelines for the Prevention of Cardiovascular Disease in Women recommend against the use of aspirin in young women as a strategy to lower heart disease risk, yet the majority of women in this survey perceived it would benefit their heart.[17]

Several barriers to prevention were noted including caregiving responsibilities. Caregiving has been linked to an increased risk of CVD in women, possibly through suboptimal lifestyle habits and psychosocial risk factors.[18,19] Future research should evaluate the influence of programs to educate and support caregivers on reducing their CVD risk.

There was an overwhelming response from women surveyed that environmental approaches such as increasing access to healthy foods, recreational facilities and nutrition labeling would be helpful for women to lower CVD risk. Health promotion approaches that focus on improving the environment have shown the potential to improve health behavior among those living in underserved areas.[20] The WISEWOMEN project also showed that an intervention to increase use of community resources could help to overcome environmental barriers to a healthy lifestyle in low-income, underinsured women in midlife.[21] Policymakers should take into consideration these findings in current national efforts to reduce the burden and costs associated with CVD.

This study was a cross-sectional sample of English-speaking women who were willing to complete a telephone interview or online survey and were relatively well-educated, so the results may not be generalizable to all women and may represent a best-case scenario. Trends observed are not likely caused by artifact because similar selection bias applied to prior surveys. Data in subpopulations, although oversampled, may not have been sufficient to draw definitive conclusions. We did not adjust for multiple comparisons, and some of the significant findings could be due to chance.

In conclusion, awareness of the leading cause of death among women has not significantly increased since 2006, but there has been a significant trend for improvement since 1997. Overall knowledge of this fact has doubled in white women since 1997 and tripled in black women, suggesting that the gap is beginning to close but still persists. The survey responses suggest that sustained educational efforts are needed to raise awareness, particularly among vulnerable populations. More emphasis should be placed on raising awareness of the symptoms of heart disease and informing women of the importance of calling 9-1-1. Many misperceptions remain about how to lower CVD risk; programs are needed to help women take action and should incorporate evidence-based prevention education.

Acknowledgments

We thank Harris Interactive for their assistance with survey design and data analysis and Lisa Rehm, MPA, for assisting with the preparation of the manuscript.

Sources of Funding

The survey was funded by the American Heart Association through a grant from Macy's Go Red For Women Multicultural Fund. Dr Mosca was supported in part by an NIH Research Career Award (K24 HL076346).

Disclosures

K.J. Robb is an employee of the American Heart Association. Relationships with industry for Dr Newby are publically available at: http://www.dcri.duke.edu/research/coi.jsp.

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HARRIS INTERACTIVE
161 Avenue of the Americas, 6th Floor
New York, NY 10013

July 16, 2009

American Heart Association
Women & Heart Disease 2009

Title for landing page: **Women's Health Study**

Demographics Template: **PRELOAD AND CUSTOM**

SECTION 200: SCREENING

NOTE TO PROGRAMMER: THROUGHOUT SURVEY DISPLAY INTERVIEWER NOTES: [INT], (VOL) FOR PHONE ONLY (Q149/2).

BASE: ALL PHONE RESPONDENTS (Q149/2)

Q600 (Q200) Hello, my name is _____ from Harris Interactive, a nationally known research company. We are talking to women about healthcare issues facing women today. We are not selling anything. The information will be used to develop important health communications for women, and all responses will be kept strictly confidential.

(INTERVIEWER: IF MALE ANSWERS PHONE, ASK "May I please speak with a woman in your household who is 25 years of age or older?" IF YES, REPEAT INTRO ABOVE AND THEN ASK AGE QUESTION BELOW.)

(INTERVIEWER: IF SPEAKING WITH FEMALE, ASK "Are you 25 years of age or older?")

1	Yes, speaking (25+)	
2	Not available, call back	
3	No female in household, or no female 25+	THANK AND TERMINATE
4	Not sure (v)	THANK AND TERMINATE
5	Refused (v)	THANK AND TERMINATE

[PN: BANK Q605, Q268, Q270 ON ONE SCREEN]

BASE: ALL WEB RESPONDENTS (Q149/1)

Q605 INSERT The progress bar below indicates approximately
what portion of the survey you have completed. <P>]

Thank you for participating in this survey about women's health. Our first few questions are for classification purposes and they enable us to select the questions to ask you later in the survey. They will also help us properly analyze responses to this survey.

BASE: WEB RESPONDENTS (Q149/1)

Q268 Are you…?

1	Male
2	Female

BASE: WEB RESPONDENTS (Q149/1)

Q270 In what year were you born? Please enter your response as a four-digit number (for example, 1977).

[RANGE: 1900 TO CURRENT YEAR-6]

BASE: ALL WEB RESPONDENTS (Q149/1)

Q280 FINAL COMPUTE FOR AGE:
PN: COMPUTE AGE FROM Q270

|__|__|__|__|

[ALL RESPONDENTS WHO ARE Q149/2 AND Q600/1, AUTO FILL WITH 25+ AT Q280]
[PN: IF US RESPONDENT (Q264/244) AND LESS THAN 18 (Q280<18) SKIP TO Q115 AFTER Q283/284]

BASE: ALL WEB RESPONDENTS (Q149/1)

Q258 In which country or region do you currently reside?

[PROGRAMMER: DISPLAY CODES IN ALPHABETICAL ORDER]
[DISPLAY RESPONSES IN TWO COLUMNS GOING DOWN.]

[PM/RESEARCHER NOTE: IF TARGETING COUNTRIES BEYOND THE LIST BELOW, ADD THE APPROPRIATE CODES FROM THE STANDARD COUNTRY LIST.]

14	Australia
15	Austria
24	Belgium
42	Canada
60	Denmark
76	France
85	Germany
89	Greece
123	Italy
286	Ireland (Republic of Ireland)
168	Netherlands
171	New Zealand
179	Norway
190	Portugal
215	Spain
223	Sweden
224	Switzerland
244	United States of America [ANCHOR AT TOP OF LIST]
266	England
267	Scotland
268	Wales
285	Northern Ireland
996	Other country

[NOTE: Q260 IS FILLED WITH FINAL COUNTRY FOR ONLINE AND ASKED FOR PHONE]

BASE: ALL WEB RESPONDENTS AND FEMALE PHONE RESPONDENTS 25+ (Q149/1 AND Q258/996) OR (Q149/2 AND Q600/1)

Q260 In which country or region do you currently reside?

[SEE MASTER DEMOGRAPHIC DOCUMENT FOR CODE FRAME]
[IF [Q149(1) AND Q256(NE 1) AND Q258(1/286)] THEN AUTO FILL WITH Q258]

BASE: ALL WEB RESPONDENTS AND FEMALE PHONE RESPONDENTS 25+ (Q149/1 OR (Q149/2 AND Q600/1)

Q264 [HIDDEN QUESTION – FINAL COUNTRY QUESTION FOR SURVEY LOGIC]

[IF U.K. (U.K., Scotland, Wales, England, Northern Ireland, Jersey, Isle of Man, Guernsey Island, Great Britain (Q260/266, 267, 268, 271, 285, 243, 127, 121, 105)) GET CODE 243. ELSE GET CODE FROM Q260.]

BASE: ALL WEB US RESPONDENTS 18+ AND FEMALE PHONE RESPONDENTS 25+ ((Q149/1 AND Q280/18+ AND Q264/244) OR (Q149/2 AND Q600/1))

Q474 Are you of Spanish or Hispanic origin, such as Latin American, Mexican, Puerto Rican, or Cuban?

1	Yes, of Hispanic origin	
2	No, not of Hispanic origin	
4	Decline to answer	
9	UNKNOWN	[DO NOT DISPLAY]

[PROGRAMMER NOTE: INSERT BELOW CHOICES <P><A REF=INSERT LINK 1 HERE>Why do we ask this question?</A>.]

BASE: ALL WEB US RESPONDENTS 18+ AND FEMALE PHONE RESPONDENTS 25+ ((Q149/1 AND Q280/18+ AND Q264/244) OR (Q149/2 AND Q600/1))

Q480 Do you consider yourself…?

[IF PHONE Q149/2 INSERT: [INTERVIEWER: READ LIST]

[PROGRAMMER NOTE: IF U.S. (Q264/244) PRESENT CODES 1-4,8,5,6,94.]
[PROGRAMMER NOTE: IF CANADIAN (Q264/42) PRESENT CODES 1,2,9-17,5,6,94.]

[PROGRAMMER NOTE: DISPLAY IN ONE COLUMN.]
[DISPLAY CODES 5, 6, AND 94 IN ORDER AS LAST THREE CATEGORIES.]

1	White	
2	Black	
3	Asian or Pacific Islander	
4	Native American or Alaskan Native	
5	Mixed Race	[ANCHOR]
6	Some other race	[ANCHOR]
7	Hispanic	
8	African American	
9	First Nation/Native Canadian	
10	South Asian	
12	Chinese	
13	Korean	
14	Japanese	
15	Other Southeast Asian	
16	Filipino	
17	Arab/West Asian	
94	Decline to Answer	[ANCHOR]

[PROGRAMMER NOTE: INSERT BELOW CHOICES <P><A REF=INSERT LINK 1 HERE>Why do we ask this question?</A>.]

BASE: OTHER RACE (Q480/6)

Q482 What other race do you consider yourself?

[NON-MANDATORY TEXT BOX]

BASE: U.S. RESIDENT AND MIXED RACIAL BACKGROUND (Q264/244 & Q480/5)

Q484 You indicated that you consider yourself of a mixed racial background. With which of the following racial groups do you most closely identify?
[PN: IF WEB Q149/1 INSERT: Please select all that apply.]
[PN: IF PHONE Q149/2 INSERT: [INTERVIEWER: READ LIST AND ACCEPT MULTIPLE RESPONSES]]

[MULTIPLE RESPONSE]
[PROGRAMMER NOTE: IF U.S. (Q264/244) PRESENT CODES 1-4,8,6,7,9,10,12-17,94.]

1 White
2 Black
3 Asian or Pacific Islander
4 Native American or Alaskan Native
5 Mixed Race
6 Some other race
7 Hispanic
8 African American
9 First Nation/Native Canadian
10 South Asian
12 Chinese
13 Korean
14 Japanese
15 Other Southeast Asian
16 Filipino
17 Arab/West Asian
94 Decline to Answer [ANCHOR][EXCLUSIVE]

BASE: ALL WEB US RESPONDENTS 18+ AND FEMALE PHONE RESPONDENTS 25+ ((Q149/1 AND Q280/18+ AND Q264/244) OR (Q149/2 AND Q600/1))

Q485 [HIDDEN COMPUTE QUESTION]

[IF ANSWERED HISPANIC (Q474/1) ANSWER TO Q485 IS CODE 7, OTHERWISE Q485=Q480.]

1 White
2 Black
3 Asian or Pacific Islander
4 Native American or Alaskan native
5 Mixed racial background
6 Other race
7 Hispanic
8 African American
9 First Nation/Native Canadian
10 South Asian
12 Chinese
13 Korean
14 Japanese
15 Other Southeast Asian
16 Filipino
17 Arab/West Asian
94 Decline to Answer

SECTION 300: GENERAL AWARENESS OF WOMEN'S HEALTH ISSUES

BASE: QUALIFIED WEB RESPONDENTS (Q149/1 & Q99/1)

Q800 (Q300) [IF WEB (Q149/1) INSERT: Our first few questions are about your views on women's health issues today.]
<p>
What do you think is the one greatest health problem facing women today?

[IF ONLINE (Q149/1) INSERT MANDATORY TEXT BOX; DO NOT DISPLAY LIST]
[NOTE: PHONE LIST IS CODE FRAME FOR ONLINE OPEN END]

BASE: QUALIFIED PHONE RESPONDENTS (Q149/2 & Q99/1)

Q805 I would first like to ask you your views on women's health issues today.

What do you think is the one greatest health problem facing women today?

[IF PHONE (Q149/2) INSERT: [INT: DO NOT READ LIST]
[SINGLE RESPONSE]

01 AIDS
02 Alzheimer's
03 Breast cancer
04 Cancer (general)
05 Diabetes
06 Drug addiction/Alcoholism
07 Heart disease/Heart attack
08 Lung cancer
09 Obesity
10 Osteoporosis
11 Smoking
12 Stroke
96 Other (VOL) [SPECIFY AT Q810]
98 Don't know (VOL)
99 Refused (VOL)

BASE: PHONE RESPONDENT AND OTHER GREATEST HEALTH PROBLEM FACING WOMEN TODAY (Q149/2 AND Q805/96)

Q810 (Q301) [INT: ASK IF NECESSARY] What do you think is the one greatest health problem facing women today?

[INT: RECORD RESPONSE VERBATIM]
[MANDATORY TEXT BOX]

BASE: QUALIFIED WEB RESPONDENTS (Q149/1 & Q99/1)

Q815 (Q305) As far as you know, what is the leading cause of death for all women?

[IF ONLINE (Q149/1) INSERT MANDATORY TEXT BOX; DO NOT DISPLAY LIST]
[NOTE: PHONE LIST IS CODE FRAME FOR ONLINE OPEN END]

BASE: QUALIFIED PHONE RESPONDENTS (Q149/2 & Q99/1)

Q820 As far as you know, what is the leading cause of death for all women?

[IF PHONE (Q149/2) INSERT:
[INT: DO NOT READ LIST]
[SINGLE RESPONSE]

01 Accidental death
02 AIDS
03 Alzheimer's
04 Breast cancer
05 Cancer (general)
06 Diabetes
07 Drug addiction/Alcoholism
08 Heart disease/Heart attack
09 Lung cancer
10 Osteoporosis
11 Smoking
12 Stroke
13 Violent crime
96 Other (VOL) [SPECIFY AT Q825]
98 Don't know (VOL)
99 Refused (VOL)

BASE: PHONE RESPONDENT AND OTHER LEADING CAUSE OF DEATH FOR WOMEN (Q149/2 AND Q820/96)

Q825 [INT: ASK IF NECESSARY] What is the leading cause of death for all women?

[INT: RECORD RESPONSE VERBATIM]
[MANDATORY TEXT BOX]

SECTION 400: COMMUNICATIONS AND BEHAVIORS RELATED TO HEART DISEASE PREVENTION

BASE: QUALIFIED WEB RESPONDENTS (Q149/1 & Q99/1)
Q905 (Q405)

[IF WEB (Q149/1) INSERT: Our next several questions are about heart disease, which includes among others, heart attack, stroke, high blood pressure and angina.]

In the past 12 months, where have you seen, heard or read about women and heart disease?

[IF ONLINE (Q149/1) INSERT MANDATORY TEXT BOX; DO NOT DISPLAY LIST]
[NOTE: PHONE LIST IS CODE FRAME FOR ONLINE OPEN END]

BASE: QUALIFIED PHONE RESPONDENTS (Q99/1 AND Q149/2)
Q910 I would now like to ask you several questions about heart disease, which includes among others, heart attack, stroke, high blood pressure and angina.

In the past 12 months, where have you seen, heard or read about women and heart disease?

[IF PHONE (Q149/2) INSERT:
[INT: DO NOT READ LIST; RECORD ALL THAT APPLY]
[INT: ACCEPT MULTIPLE RESPONSES]

[MULTIPLE RESPONSES]

01 In a magazine
02 On the radio
03 In a book
04 On TV
05 Information in a brochure
06 Provided by physician, nurse or other healthcare professional
07 In a newspaper
08 On the Internet or World Wide Web
09 From a friend or relative
10 Library
96 Other (VOL) [SPECIFY AT Q915]
11 Did not see, hear or read anything (VOL) [E]
98 Don't know (VOL) [E]
99 Refused (VOL) [E]

BASE: PHONE RESPONDENT AND OTHER PLACES HAVE SEEN, HEARD, OR READ INFORMATION ABOUT HEART DISEASE WITHIN THE PAST 12 MONTHS (Q149/2 AND Q910/96)
Q915 [INT: ASK IF NECESSARY] Where else have you seen, heard, or read this information?

[INT: RECORD RESPONSE VERBATIM]
[MANDATORY TEXT BOX]

BASE: QUALIFIED ONLINE RESPONDENTS Q99/1 AND Q149/1)

Q920 Have you used any of the following internet sources to learn more about women and heart disease in the last 12 months? Please select all that apply.

[RANDOMIZE]
[MULTIPLE RESPONSES]

1 **News websites** such as CNN.com, NYTimes.com, Univision.com, Telemundo.com etc.
2 **Medical information** websites such as WebMD.com, Mayoclinic.com, etc.
3 **Internet portals** such as iVillage.com, MSN.com, Terra.com, etc.
4 **Search engines** such as Google.com, Yahoo.com, etc.
5 **Government websites** such as Medlineplus.gov, NIH.gov, CDC.gov, etc.
6 **Magazine websites** such as Oprah.com, Vanidades, Ebony, etc.
7 **General information websites** such as Wikipedia.org, About.com, etc.
8 **Social networking sites** such as Facebook.com, MySpace.com, MiGente.com, etc.
9 **Nonprofit health organization sites** such as American Heart Association or National Women's Health Resource Center
10 **Other websites** ANCHOR
11 **I have not used any internet sources to learn more about women and heart disease** [ANCHOR; EXCLUSIVE]

BASE: QUALIFIED RESPONDENTS OR ALL HPOL RESPONDENTS (Q99/1 OR Q75/1) (SOFT EXIT #1)

Q925 (Q415) Have any of your doctors ever discussed heart disease with you when discussing your health?

[RESULTS LABEL – Percent indicating doctors have discussed health disease with them]

1 Yes
2 No
8 Don't know (VOL) [INSERT IF PHONE (Q149/2)]
9 Refused (VOL) [INSERT IF PHONE (Q149/2)]

BASE: QUALIFIED RESPONDENTS (Q99/1)

Q930 (Q420) How informed are you about heart disease in women? Would you say you are:

[Q149/2 INSERT: INT: READ LIST]
[SINGLE RESPONSE]

1 Very well informed
2 Well informed
3 Moderately informed
4 Not at all informed
8 Don't know (VOL) [INSERT IF PHONE (Q149/2)]
9 Refused (VOL) [INSERT IF PHONE (Q149/2)]

BASE: QUALIFIED RESPONDENTS (Q99/1)

Q935 (Q425) How informed are you about stroke or "brain attack" in women? Would you say you are:

IF PHONE (Q149/2) INSERT [INT: READ LIST]]

1 Very well informed
2 Well informed
3 Moderately informed
4 Not at all informed
5 Don't know (VOL) [INSERT IF PHONE (Q149/2)]
6 Refused (VOL) [INSERT IF PHONE (Q149/2)]

BASE: QUALIFIED RESPONDENTS OR ALL HPOL RESPONDENTS (Q99/1 OR Q75/1) (SOFT EXIT #2)

Q940 (Q475) Have you been diagnosed with diabetes?

[RESULTS LABEL – Percent indicating they have been diagnosed with diabetes]

1 Yes
2 No
8 Don't know (VOL) [INSERT IF PHONE (Q149/2)]
9 Refused (VOL) [INSERT IF PHONE (Q149/2)]

BASE: QUALIFIED RESPONDENTS OR ALL HPOL RESPONDENTS (Q99/1 OR Q75/1) (SOFT EXIT #3)

Q950 (Q478) Have you ever had a heart attack?

[RESULTS LABEL – Percent indicating they have had a heart attack]

1 Yes
2 No
8 Don't know (VOL) [INSERT IF PHONE (Q149/2)]
9 Refused (VOL) [INSERT IF PHONE (Q149/2)]

BASE: QUALIFIED RESPONDENTS OR ALL HPOL RESPONDENTS (Q99/1 OR Q75/1) (SOFT EXIT #4)

Q955 (Q480) Have you ever had a stroke or "brain attack"?

[RESULTS LABEL – Percent indicating they have had a stroke or "brain attack"]

1 Yes
2 No
8 Don't know (VOL) [INSERT IF PHONE (Q149/2)]
9 Refused (VOL) [INSERT IF PHONE (Q149/2)]

SECTION 500: SPECIFIC UNDERSTANDING OF HEART DISEASE AMONG WOMEN/BEHAVIORS ASSOCIATED WITH PREVENTION

BASE: QUALIFIED WEB RESPONDENTS (Q149/1 & Q99/1)

Q1000 (Q525) Based on what you know, what warning signs do you associate with having a heart attack?

[IF ONLINE Q149/1 INSERT LARGE MANDATORY TEXT BOX; DO NOT DISPLAY LIST]
[NOTE: PHONE CODES SERVE AS ONLINE CODE FRAME]

BASE: QUALIFIED PHONE RESPONDENTS (Q149/2 & Q99/1)

Q1005 Based on what you know, what warning signs do you associate with having a heart attack?

[Q149/2 INSERT:
[INT: DO NOT READ LIST; RECORD ALL THAT APPLY]
[INT: ACCEPT MULTIPLE RESPONSES]
[MULTIPLE RESPONSES]

01 Chest pain
02 Fatigue
03 Nausea
04 Pain that spreads to the shoulders, neck, or arms
05 Shortness of breath
06 Tightness of the chest
96 Other (VOL) [SPECIFY AT Q1010]
98 Don't know (VOL) E
99 Refused (VOL) E

BASE: PHONE RESPONDENT AND OTHER WARNING SIGNS OF HAVING HEART ATTACK (Q149/2 AND Q1005/96)

Q1010 (Q526) [INT: ASK IF NECESSARY] What other warning signs do you associate with having a heart attack?

[INT: RECORD RESPONSE VERBATIM]
[MANDATORY TEXT BOX]

BASE: QUALIFIED WEB RESPONDENTS (Q149/1 & Q99/1)

Q1015 (Q1527) If you thought you were experiencing signs of a heart attack, what is the first thing you would do?

[IF ONLINE Q149/1 INSERT LARGE MANDATORY TEXT BOX; DO NOT DISPLAY LIST]
[NOTE: PHONE CODES SERVE AS ONLINE CODE FRAME]

BASE: QUALIFIED PHONE RESPONDENTS (Q149/2 & Q99/1)

Q1020 If you thought you were experiencing signs of a heart attack, what is the first thing you would do?

[Q149/2 INSERT:
[INT: DO NOT READ LIST]
[SINGLE RESPONSE]

1 Take an aspirin
2 Call your doctor
3 Call a family member
4 Call 911
5 Go to the hospital
96 Other (VOL) [SPECIFY AT Q1025]
97 Don't know (VOL)
98 Refused (VOL)

BASE: PHONE RESPONDENT AND OTHER ACTIONS IF HAVING HEART ATTACK SYMPTOMS (Q149/2 AND Q1020/96)

Q1025 (Q1528) [INT: ASK IF NECESSARY] What else would you do if you thought you were experiencing signs of a heart attack?

[INT: RECORD RESPONSE VERBATIM]
[MANDATORY TEXT BOX]

BASE: QUALIFIED RESPONDENTS

Q2230 (Q529) Now, [INSERT IF PHONE (Q149/2): I IF WEB (Q149/1): we] would like to discuss ways to prevent heart disease.

Which of the following activities do you believe can prevent or reduce the risk of getting heart disease?

[Q149/2 INSERT: INT: READ LIST]
[RANDOMIZE]
[DISPLAY GRID HEADERS AT TOP, MIDDLE AND BOTTOM OF LIST]

Q2231

1. Yes
2. No

01 Quitting smoking
02 Getting physical exercise
03 Taking special vitamins like E, C or A
04 Losing weight
05 Reducing dietary cholesterol intake
06 Reducing stress
07 Taking multivitamins with folic acid
08 Taking hormone-replacement therapy
09 Reducing sodium or salt in the diet
10 Reducing animal products in your diet (such as meat, whole milk, butter and cream)
11 Aromatherapy
12 Taking aspirin regularly
13 Maintaining a healthy blood pressure
14 Maintaining a healthy cholesterol level
15 Fish oil/Omega 3 fatty acids
16 Fiber
17 Antioxidants
18 Plant Stanols and Sterols
19 Preventing gum disease
20 Praying or meditating
21 Getting adequate sleep

BASE: QUALIFIED RESPONDENTS (Q99/1)

Q2240 Have you done any of the following things to monitor or improve your health in the last year?

[IF Q149/2 INSERT: INT: READ LIST]
[RANDOMIZE]

Q2241

1. Yes
2. No

01 Went to see a doctor or other health care professional
02 Increased physical activity
03 Decreased consumption of unhealthy foods
04 Quit smoking/using tobacco products
05 Lost weight
06 Tried to better manage stress
07 Got a diagnostic test for heart disease such as a stress test or heart scan
08 Had cholesterol checked
09 Had blood pressure checked
10 Started taking vitamins or dietary supplements

BASE: ONLINE RESPONDENT AND DID ANYTHING TO MONITOR OR IMPROVE HEALTH (Q149/1 AND SELECTED ONE OR MORE ITEMS AT Q2240/1-10 AND Q2241/1)

Q638 Thinking about the things ***you*** have done to improve ***your own*** health, please tell us if any of the following prompted you to take action.

[RANDOMIZE]
[MULTIPLE RESPONSE]

1 I saw, heard, or read information related to heart disease
2 My health care professional encouraged me to take action
3 A family member or relative encouraged me to take action
4 A friend encouraged me to take action
5 A family member/relative developed heart disease, got sick, or died
6 A friend developed heart disease, got sick, or died
7 I experienced symptoms that I thought were related to heart disease
8 I wanted to feel better
9 I wanted to avoid taking medications
10 I wanted to improve my health
11 I wanted to live longer
12 I did it for my family
13 Something else ANCHOR

BASE: QUALIFIED ONLINE RESPONDENTS (Q149/1 AND Q99/1)

Q640 The following is a list of things some women have said about living a heart healthy lifestyle. Please tell us if you strongly agree, somewhat agree, somewhat disagree or strongly disagree with each item.

Q641

1 Strongly disagree
2 Somewhat disagree
3 Somewhat agree
4 Strongly agree

[RANDOMIZE]
[PN: DISPLAY GRID HEADERS AT TOP, MIDDLE AND BOTTOM]

1 I don't perceive myself to be at risk for heart disease
2 I don't want to change my lifestyle
3 I don't think changing my behavior will reduce my risk of developing heart disease
4 I'm fearful of change
5 I'm not confident that I can successfully change my behavior
6 I am too stressed to do the things that need to be done
7 I am too depressed to do the things that need to be done
8 I am too ill/old to make changes
9 I don't have the money or insurance coverage to do what needs to be done
10 I have family obligations and other people to take care of
11 My family/friends have told me that I don't need to change
12 I don't have the time to take care of myself
13 My health care professional doesn't think I need to worry about heart disease
14 My health care professional doesn't speak my language
15 I am confused by what I'm supposed to do to change my lifestyle
16 I feel the changes required are too complicated
17 I don't know what I should do
18 There is too much confusion in the media about what to do
19 My health care professional doesn't explain clearly what I should do
20 God or some higher power ultimately determines my health

BASE: QUALIFIED ONLINE RESPONDENTS (Q149/1 AND Q99/1)

Q2000 Do you have a health care professional who you see on a regular basis?

1. Yes
2. No

BASE: ONLINE RESPONDENT AND HAS A HEALTH CARE PROFESSIONAL (Q149/1 AND Q99/1 AND Q2000/1)

Q2005 When did you last speak with a health care professional about your risk of heart disease? Was it?

1 Within the past 6 months
2 More than 6 months ago but less than 1 year ago
3 More than 1 year ago but less than 2 years ago
4 More than 2 years ago
5 Never

BASE: ONLINE RESPONDENT AND HAS NOT SPOKEN TO A HEALTH CARE PROFESSIONAL ABOUT THEIR RISK OF HEART DISEASE IN THE PAST YEAR (Q149/1 AND /Q99/1 AND Q2005/3,4,5)

Q2010 Below is a list of reasons people have given for why they have not recently spoken with their health care professional about how to reduce their risk of heart disease. For each one, please tell us if it is a major reason, minor reason or not a reason for why you have not spoken to your health care professional about reducing your risk of heart disease in the last year.

Q2011

1 Major reason
2 Minor reason
3 Not a reason

[INT: READ LIST]
[RANDOMIZE]

1 My health care professional does not bring it up
2 My health care professional does not know about heart disease
3 My health care professional seems too busy to discuss my risk of heart disease
4 My health care professional is usually more focused on treating illness or health problems than on prevention
5 I don't know what to ask my health care professional or how to bring it up
6 I don't feel the need to talk about heart disease with my health care professional
7 I already know what to do about reducing my risk of heart disease
8 I don't feel that I am at higher risk for heart disease than others

BASE: QUALIFIED RESPONDENTS (Q99/1)

Q1035 How helpful do you think each of the following would be in leading you to follow a more heart healthy lifestyle? [IF Q149/2 INSERT: Would you say each is very helpful, somewhat helpful, not very helpful or not at all helpful? How helpful would [READ LIST] be?]

Q1036

[PN: FOR WEB DISPLAY ATTRIBUTES FROM 4 TO 1]

1 Very helpful
2 Somewhat helpful
3 Not very helpful
4 Not at all helpful
5 Don't know (VOL) [INSERT IF PHONE (Q149/2)]
6 Refuse (VOL) [INSERT IF PHONE (Q149/2)]

[RANDOMIZE]

1 Access to more or better fruits, vegetables and other healthy foods
2 Greater access to indoor and outdoor public recreational facilities
3 Bans on trans fats in restaurants
4 Smoking bans
5 Stricter regulations on pollution
6 Requiring all restaurants to post nutrition information for menu items
7 Increased public safety in public recreation areas

BASE: QUALIFIED ONLINE RESPONDENTS (Q149/1 AND Q99/1)

Q1040 (Q530) Based on what you know, what warning signs do you associate with having a stroke or "brain attack"?

[IF ONLINE (Q149/1) INSERT LARGE MANDATORY TEXT BOX; DO NOT DISPLAY LIST]
[NOTE: LIST BELOW IS CODE FRAME FOR ONLINE OPEN END]

BASE: QUALIFIED PHONE RESPONDENTS (Q149/2 AND Q99/1)
Q2245 Based on what you know, what warning signs do you associate with having a stroke or "brain attack"?

[IF PHONE (Q149/2) INSERT: [INT: READ LIST]]

[MULTIPLE RESPONSES]

01 Loss of/trouble talking or trouble understanding speech
02 Sudden dimness/loss of vision, often in one eye
03 Sudden, severe headache
04 Sudden weakness/numbness of face or limb on one side
05 Unexplained dizziness
06 [IF PHONE (Q149/2): Don't Know (VOL)]
07 [IF PHONE (Q149/2): Refused (VOL)]

BASE: QUALIFIED ONLINE RESPONDENTS (Q149/1 AND Q99/1)
Q1045 (Q1532) If you thought you were experiencing signs of a stroke or "brain attack," what is the first thing you would do?

[IF ONLINE (Q149/1) INSERT LARGE MANDATORY TEXT BOX; DO NOT DISPLAY LIST]
[NOTE: LIST BELOW IS CODE FRAME FOR ONLINE OPEN END]

BASE: QUALIFIED PHONE RESPONDENTS (Q149/2 AND Q99/1)
Q2250 If you thought you were experiencing signs of a stroke or "brain attack," what is the first thing you would do?

[IF PHONE (Q149/2) INSERT: [INT: READ LIST]]

1 Go to the hospital
2 Call your doctor
3 Call 911
4 Call your spouse or family
5 [IF PHONE (Q149/2) INSERT: Don't know (VOL)]
6 [IF PHONE (Q149/2) INSERT: Refused (VOL)]

SECTION 700: CAREGIVING

BASE: QUALIFIED RESPONDENTS (Q99/1)

Q1100 Next, [PHONE: I WEB: we] have some questions about care you may be providing to an adult friend or family member. If you have provided care for more than one adult friend or family member, please respond thinking about the one for whom you spent the greatest amount of time on care giving responsibilities.

To what extent are you involved in the care (such as assistance with daily activities, doctor visits, and/or medications) of an adult friend or family member?<p> [IF Q149/2 INSERT: [INT: READ ENTIRE LIST BEFORE ACCEPTING RESPONSE]]

1 [PHONE: You are WEB: I am] a primary caregiver for an adult friend or family member
2 [PHONE: You WEB: I] care for an adult friend or family member most of the time
3 [PHONE: You WEB: I] care for an adult friend or family member some of the time
4 [PHONE: You WEB: I] care for an adult friend or family member occasionally
5 [PHONE: You WEB: I] cared for an adult friend or family member in the past but no longer provide care
6 [PHONE: You WEB: I] have never been involved in the care of an adult friend or family member
7 Don't know (VOL) [INSERT IF PHONE (Q149/2)] ANCHOR, E
8 Refused (VOL) [INSERT IF PHONE (Q149/2)] ANCHOR, E

BASE: CAREGIVERS (Q1100/1,2,3,4,5)

Q1110 On average, about how many hours [IF Q1100/1-4 INSERT: do you; IF Q1100/5 INSERT: did you] spend on care giving responsibilities for an adult friend or family member each week?

[Q149/2 INSERT: INT: READ IF NECESSARY]
01 Less than 1 hour
02 2-5 hours
03 6-10 hours
04 11-20 hours
05 21-40 hours
06 More than 40 hours
07 Don't know (VOL) [INSERT IF PHONE (Q149/2)] ANCHOR, E
08 Refused (VOL) [INSERT IF PHONE (Q149/2)] ANCHOR, E

BASE: CAREGIVERS (Q1100/1,2,3,4,5)

Q1115 How do you feel your care giving responsibilities have impacted your health? [IF Q149/2 INSERT: Would you say they have had a…]

[Q149/2 INSERT: INT: READ LIST]

[PN: DISPLAY ATTRIBUTES FROM 5 TO 1 FOR WEB]

1 Very positive impact
2 Somewhat positive impact
3 No impact
4 Somewhat negative impact
5 Very negative impact
6 Don't know (VOL) [INSERT IF PHONE (Q149/2)] ANCHOR, E
7 Refused (VOL) [INSERT IF PHONE (Q149/2)] ANCHOR, E

BASE: NEGATIVE IMPACT (Q1115/4,5)

Q2255 Have your care giving responsibilities negatively impacted your health in any of the following ways?

[Q149/2 INSERT: INT: READ LIST]
[RANDOMIZE]

		Q2256
		1. Yes 2. No
1	[PHONE: Your WEB: My] care giving has caused [PHONE: your WEB: my] stress to increase	
2	[PHONE: You WEB: I] don't have time to exercise	
3	[PHONE: You aren't WEB: I am not] following a healthy diet	
4	[PHONE: You WEB: I] don't have enough money left over for healthy food or to cover health care	
5	[PHONE: You are WEB: I am] more exhausted than [PHONE: you WEB: I] used to be	
6	[PHONE: You WEB: I] have not gone to the doctor when [PHONE: you were WEB: I was] sick	
7	[PHONE: You WEB: I] don't have enough time for [PHONE: yourself WEB: myself]	
8	[PHONE: You WEB: I] don't spend enough time with other friends and family members	
9	[PHONE: You WEB: I] have gained or lost weight	
10	[PHONE: You WEB: I] have trouble sleeping	
11	Something else	ANCHOR

SECTION 100: CLASSIFICATION DATA

[PN: PRESENT ALL DEMOGRAPHIC QUESTIONS TO PHONE AND WEB UNLESS SPECIFIED OTHERWISE]

BASE: QUALIFIED PHONE RESPONDENTS (Q149/2 AND Q99/1)
Q1300 (Q110) Next, I have a few more general questions. Which of the following ranges represents your age?

[Q149/2 INSERT: INT: READ LIST UNTIL ANSWERED]

01 25-29
02 30-34
03 35-39
04 40-44
05 45-49
06 50-54
07 55-59
08 60-64
09 65-74
10 75-84
11 85 or older
99 Refused (VOL) [DISPLAY IF PHONE (Q149/2)]

[PN: DISPLAY Q1305 AFTER Q372]
BASE: QUALIFIED RESPONDENTS (Q99/1)
Q1305 In total, how many generations currently live in your household?

[IF Q149/1: SHOW ALL; IF **Q149/2** INSERT: **[**INT: IF NEEDED:] For example, if you live alone or only with a spouse or roommate, that would be one generation. If you live with your parents or your children, that would be two generations. If you live with your parents and your children, that would be three generations.

[MANDATORY TEXT BOX]
[__] RANGE: 1-5

BASE: QUALIFIED RESPONDENTS (Q99/1)
Q1310 [IF Q149/1 INSERT: Next, I have a few more general questions. <p>]

Which of the following types of health insurance, if any, do you currently have?

[Q149/2 INSERT: INT: READ LIST BEFORE ACCEPTING RESPONSES]
[RANDOMIZE]
[MULTIPLE RESPONSE]

1	Health insurance provided by [PHONE: your WEB: my] employer or school	
2	Health insurance through a family member's employer or school	
3	Private insurance coverage that you pay for out-of-pocket	
4	Medicare	
5	Medicaid or other public insurance	
6	Veteran's Affairs (VA)	
7	Some other type of insurance	ANCHOR
8	No insurance coverage	ANCHOR, E
9	Don't know (VOL) [DISPLAY IF PHONE (Q149/2)]	ANCHOR, E
10	Refused (VOL) [DISPLAY IF PHONE (Q149/2)]	ANCHOR, E

BASE: ALL QUALIFIED (Q99/1)
Q1315 What is your current height?

[IF Q149/2 INSERT: INT: IF DOES NOT KNOW ENTER 98. IF REFUSES ENTER 99.]

[NON-MANDATORY RANGE = (feet = 0-7,98,99) (inches = 0-11,98,99)]

|_| feet |_|_| inches

BASE: ALL QUALIFIED (Q99/1)
Q1320 What is your current weight?

[IF Q149/2 INSERT: INT: IF DOES NOT KNOW ENTER 998. IF REFUSES ENTER 999.]

[NON-MANDATORY RANGE: 25 – 800, 998, 999]

|_|_|_| pounds

[PN: INSERT Q1325-Q1355 AFTER Q492]
BASE: HISPANIC RESPONDENTS (Q485/7)
Q1325 Which language do you usually speak at home?

[PROGRAMMER: PLEASE DISPLAY RESPONSES HORIZONTALLY WITH RESPONSES UNDER RADIO BUTTONS]
[SHRINK FONT 1 SIZE AND MAKE BOLD]
[PN: DISPLAY ATTRIBUTES FROM 5 TO 1 ON PHONE (Q149/2)

1 Only Spanish
2 Spanish more
than English
3 Spanish and
English equally
4 English more
than Spanish
5 Only English
9 Decline to answer

BASE: HISPANIC RESPONDENTS (Q485/7)
Q1330 Would you say you can carry on a conversation in <U>Spanish</U>, both understanding and speaking…?

[PN: DISPLAY ATTRIBUTES FROM 4 TO 1 ON PHONE (Q149/2)]

1 Not at all
2 Just a little
3 Pretty well
4 Very well
8 Don't know (VOL) [DISPLAY IF PHONE (Q149/2)] ANCHOR, E
9 Refused (VOL) [DISPLAY IF PHONE (Q149/2)] ANCHOR, E

BASE: HISPANIC RESPONDENTS (Q485/7)
Q1335 Would you say you can carry on a conversation in <U>English</U>, both understanding and speaking…?

[PN: DISPLAY ATTRIBUTES FROM 4 TO 1 ON PHONE (Q149/2)]

1 Not at all
2 Just a little
3 Pretty well
4 Very well
5 Don't know (VOL) [DISPLAY IF PHONE (Q149/2)] ANCHOR, E
6 Refused (VOL) [DISPLAY IF PHONE (Q149/2)] ANCHOR, E

BASE: HISPANIC RESPONDENTS (Q485/7)
Q1340 Would you say you can read a newspaper or book in <U>Spanish</U>…?

[PN: DISPLAY ATTRIBUTES FROM 4 TO 1 ON PHONE (Q149/2)]

1 Not at all
2 Just a little
3 Pretty well
4 Very well
5 Don't know (VOL) [DISPLAY IF PHONE (Q149/2)] ANCHOR, E
6 Refused (VOL) [DISPLAY IF PHONE (Q149/2)] ANCHOR, E

BASE: HISPANIC RESPONDENTS (Q485/7)
Q1345 Would you say you can read a newspaper or book in <U>English</U>…?

[PN: DISPLAY ATTRIBUTES FROM 4 TO 1 ON PHONE (Q149/2)]

1 Not at all
2 Just a little
3 Pretty well
4 Very well
5 Don't know (VOL) [DISPLAY IF PHONE (Q149/2)] ANCHOR, E
6 Refused (VOL) [DISPLAY IF PHONE (Q149/2)] ANCHOR, E

BASE: HISPANIC RESPONDENTS (Q485/7)
Q1350 You indicated that you consider yourself Hispanic. From what country or region did you or your ancestors come? Please select all that apply.

[MULTIPLE RESPONSE]
[INCLUDE WHY DO WE ASK THIS LINK]

1 Cuba
2 Mexico
3 Puerto Rico
4 Central or South America
6 Another country or region
9 Decline to answer E

BASE: SELECTED ANOTHER COUNTRY OR REGION (Q1350/6)
Q1355 (Q567) From what country or region did you or your ancestors come?

[NON-MANDATORY TEXT BOX]

[PN: INSERT AFTER Q368]
BASE: QUALIFIED RESPONDENTS (Q99/1)
Q1360 (Q140) Including you, how many women, 25 or over, live in this household?

(**Q149/2 INSERT:** [INTERVIEWER NOTE: RECORD NOT SURE AS 98 AND DECLINE TO ANSWER AS 99.])

[RANGE: 1-20, 98, 99]

[PROGRAMMER NOTE: PLEASE DISPLAY Q1400 AND Q1405 ON ONE SCREEN]

BASE: QUALIFIED RESPONDENTS (Q99/1)

Q434 What is the highest level of education you have completed or the highest degree you have received?

1	Less than high school
2	Completed some high school
3	Completed high school
4	Completed some college
70	Associate Degree
5	Completed College
6	Completed some graduate school
7	Completed graduate school

BASE: QUALIFIED RESPONDENTS (Q99/1)

Q460 Which of the following income categories best describes your total 2008 household income before taxes?

1	Less than $15,000
2	$15,000 to $24,999
3	$25,000 to $34,999
4	$35,000 to $49,999
5	$50,000 to $74,999
6	$75,000 to $99,999
7	$100,000 to $124,999
8	$125,000 to $149,999
9	$150,000 to $199,999
10	$200,000 to $249,999
11	$250,000 or more
9994	Decline to answer