C. Data and Data Collection

Appendix 1C. IRB Notification of Exemption

A proposal for the Brigham and Women's Hospital Family History Project was submitted to the Institutional Review Board (IRB) of Brigham and Women's Hospital for their review. On November 25, 2005, the principal investigator was notified of the proposal's approval. As the BWH FHP was not designed to either collect or analyze an employee's family health history, the BWH FHP received an "exempt" status from the hospital's IRB.

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Partners Human Research Committee Partners Human Research Office 116 Huntington Avenue, Suite 1002 Boston, MA 02116 (617) 424-4100

Application: Notification of Exemption

Protocol #: 2005-P-002383/1; BWH

Date: 11/29/2005

To: Michael Murray, MD

> Harvard New Research Bldg. 77 Avenue Louis Pastueur

From: Thelma Bennett

luvoi O Neill for T.B. PHS Research Management 116 Huntington Ave Suite 1002

Title of Protocol:

Brigham and Women's Hospital Family History Project

Version Date:

11/10/2005

Sponsor:

NIH-NHGRI National Human Genome Research Institute

IRB Review Type:

Exempt

Exemption #:

45 CFR 46.101(b) (2) Use of educational tests, survey procedures,

observation, etc. to collect anonymous data.

IRB Approval Date:

11/28/2005

This project meets the criteria for exemption from further IRB review per the regulations found at 45 CFR 46.101(b) (2) Use of educational tests, survey procedures, observation, etc. to collect anonymous data.

Additional review by the HRC (IRB) is not needed. You will not be required to submit annual progress reports; however you may not make changes to this research activity without first discussing them with the Human Research Office (IRB) to determine that such changes are within the parameters for exemption.



Appendix 2C. Spring (Preliminary) Participation Survey – March 2006

Data collection for the BWH FHP included two separate rounds of anonymous survey-based feedback on the usability of the "My Family Health Portrait" tool. The first of the two survey periods occurred in March 2006, approximately one-third of the way through the project. Surveys were returned either electronically or at drop-off locations within the hospital and off-site locations.

Forty-seven percent of survey respondents answered that they had already completed their family histories using "My Family Health Portrait".

A group of 24 BWH employees agreed to a follow up telephone conversation. These interviews allowed for better understanding of how to target outreach in the remaining months of the project.

- [1] Survey Instrument
- [2] Telephone follow-up interview of participants

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BWH Family History Project Employee Participant Survey

(it will take approximately five minutes to complete this survey)

Date of this Survey/_/_
Age Gender Female Male
Ethnicity or Race (mark one or more) American Indian or Alaska Native Asian or Pacific Islander Black or African American Hispanic or Latino White or European American Other, please specify:
1. Which of the following describes your employment at BWH? [check one] Management Health care professional Service Administrative Researcher Not sure Non-employee
2. Did you complete the Surgeon General's "My Family Health Portrait"? Yes No If no, why not?
If you answered "no" to question #2 you may stop here (or go to https://familyhistory.hhs.gov/ to participate now). Thank you for completing this survey.

- 1 -

If you answered "yes" to question #2, please continue this survey.

2C1. Spring Participation Survey

3.	What motivated you to complete your family health history using the Surgeon General's "My Family Health Portrait"? [check all that apply] I thought it would be interesting I thought it would be fun I thought it could be beneficial to my health I did it for the sake of a family member if you had a family member in mind, was it a parent a brother or a sister a child other [relationship?] I was encouraged by my co-workers or supervisors Other, please explain
4.	How long did it take you to get through the "My Family Health Portrait" the first time? (almost everyone will leave blanks and have "I don't know" answers at first) [check one] Less than 10 minutes 10-20 minutes 20-30 minutes 30-60 minutes More than 1 hour
5.	How many times have you returned to your family health history document to add or change information? [check one] None 1 2-3 4-5 More than 5
6.	What difficulties did you have in completing your family health history? [check all that apply] Discussing the subject of health history with family members Knowing what questions to ask my family members Obtaining the health history information Knowing where or how to enter information Using the computer version of the history tool Other, please explain None
7.	Would you encourage others to participate in the BWH Family History Project? Yes No
8.	Did you learn anything new about the health of your relatives in the process of completing your family health history? Yes No

2C1. Spring Participation Survey

9.	Did you share anything about your health with a relative in the process of completing/collecting your family health history? Yes			
	No			
10.	What did you do with the family health history portrait you created? [check apply]	all that		
	Kept it to myself			
	Shared it with my health care provider			
	Shared it with my family members			
	which family members did you share it with? [check all that a	apply]		
	a parent			
	a brother or a sister a child			
	other [relationship?]			
	Other, please explain			
11	How many relatives did you talk to in completing your family health history)		
11.	How many relatives did you talk to in completing your family health history? [check one]			
	None			
	1 2-3			
	2-3			
	4-5			
	More than 5			
12.	If you brought your family health history to your health care provider, which	of the		
	following occurred? [check all that apply]			
	Discussion			
	Recommendation of specific lifestyle changes			
	Genetic testing			
	Medical testing other than genetic testing			
	Referral to a consultant [check all that apply]			
	Genetic Counselor			
	Medical Geneticist			
	Oncologist Gastroenterologist			
	Castroenterologist			
	Endocrinologist			
	Ophthalmologist			
	Other, please specify			
	Nothing, we didn't even discuss it			
	I did not bring my family health history to my health care provide	der		
	if not, why not?			
13.	Are you interested in having a genetics professional (a genetic counselor o	r		
	medical geneticist) review your family health history with you?			
	Yes			
	No			
	[If you answered "yes," please provide your contact information:			

2C1. Spring Participation Survey

14. May a BWH Family History Project staff member contact you to discuss further questions related to your participation in this project? Yes No
[If you answered "yes," please provide your contact information:]
15. Have you filled out the BWH Family History Project survey before? Yes[How many other times?] No
16. What changed your mind, if the last time you filled out a survey you answered "NO" to question 2, "Did you complete the Surgeon General's "My Family Health Portrait"?" Friends and co-workers described it as a positive experience I was encouraged to participate by a family member I am more trusting of the process now Other, please explain This doesn't apply to me
17. Have you heard of the Surgeon General's Family History Initiative? Yes No (Go to 19)
18. If you answered "yes" to question 17, when did you first hear about the Surgeon General's Family History Initiative? Before I heard about the BWH Family History Project After I heard about the BWH Family History Project
19. Where did you first hear about the importance of collecting your family's health history? Television Newspaper Magazine Health Professional BWH Family History Project Surgeon General's Family History Initiative

THANK YOU FOR COMPLETING THIS SURVEY!

If you have questions please contact us at 617-525-4777 or familyhistoryproject@partners.org.

If you would like to return your completed survey by interoffice mail, please send it to: Family History Project BWH Genetics Division NRB 466E

2C2. Telephone Follow-up Interview of Participants

1.	1. How did you hear about the BWH Family History Project (be as specific as possible)?				
2.	2. Did you complete your family history at home, at work, or both?				
	Home	Work	Both		
3.	Did you enter information about any additional diseases [other than the standard six diseases asked about for each family member on the Surgeon General's website] for any family members?				
	Yes	No			
4.	Have you emailed your	electronic famil	y history to any	of your family members?	
	Yes	No			
5.	Did you use the paper v collection?	ersion of "My F	amily Health Po	rtrait" during any of your d	lata
	Yes	No			
6.	Do you have any though History Project?	nts on how to en	courage BWHer	s to participate in the Fami	ly
7.	Do you have suggestion	s for getting BV	VHers to particip	ate in our fall survey perio	d?
8.	8. Please rate your enthusiasm about bringing your family health history to your primary care provider, with 1 being the least enthusiastic and 5 being the most enthusiastic (please be honest!):				
1	2	3	4	5	
9.	9. Using the same enthusiasm scale from 1-5 from the last question, with 1 being the least enthusiastic and 5 being the most enthusiastic, please tell me how enthusiastic your healt care provider seemed to be about receiving your family health history:				
1	2	3	4	5	
10.	If your health care provi family health history, ca			erral for you after reviewing cs with me?	g your

2C2. Telephone Follow-up Interview of Participants

Phone script for people who have received email notifying them that you would be calling:

Hello,

My name is Lauren Ryan, and I'm calling to follow-up with you regarding the preliminary

Family History Project survey you completed in March. On that survey, you answered "yes" to the question, "May a BWH Family History Project staff member contact you to discuss further questions related to your participation in this project?". You should have received an email from the Family History Project on ______ informing you that I would be calling to ask you a few follow-up questions about your participation in the Family History Project. This telephone call should take between 10 and 15 minutes. Is this a good time for you?

Phone script for "cold calls" (those employees for whom we do not have an email address):

Hello,

My name is Lauren Ryan, and I'm calling to follow-up with you regarding the preliminary Family History Project survey you completed in March. On that survey, you answered "yes" to the question, "May a BWH Family History Project staff member contact you to discuss further questions related to your participation in this project?". I am calling to ask you a few follow-up questions about your participation in the Family History Project. This telephone call should take between 10 and 15 minutes. Is this a good time for you?

Appendix 3C. Fall (Final) Participation Survey – November 2006

The Spring participation survey was subsequently modified to create the Fall survey, which was distributed in November 2006. Surveys were again returned either electronically, via one of our drop-off location sites, or handed directly to project staff and volunteers.

Approximately three-quarters (73%) of Fall survey respondents were female and 26% were male, which is consistent with the gender distribution of BWH hospital employees (74% female, 26% male). The reasons that majority of non-participating employees reported not yet completing their family histories were either "being unaware of the project" or "a lack of time". Notably, one-quarter of employees (25%) reported that they still planned to complete their family histories and very few (6%) expressed concerns about privacy.

Over half of the project participants either learned something new about their relatives' health histories or shared something about their own health with a relative (54% and 58%, respectively). While 55% of respondents kept the family history they created to themselves, 21% shared the information with their health care provider. For the 21% of employees who brought their completed family histories to their health care providers, 61% estimated their provider's interest as very high, 25% received recommendations for specific lifestyle changes, 18% were referred to a specialist (most often a cardiologist or gastroenterologist) and 33% reported that the family history they brought with them to their appointment was not addressed. Ninety-two percent of respondents reported that they would encourage others to participate in the BWH FHP.

[1] Survey Instrument

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BWH Family History Project Employee Participant FALL SURVEY

(it will take approximately five minutes to complete this survey)

Date of this survey/_/_ Have you completed this survey previously? yes no
Age Gender Female Male
Ethnicity or Race (check one or more) American Indian or Alaska Native Asian or Pacific Islander Black or African American Hispanic or Latino White or European American Other, please specify:
1. Which of the following describes your employment at BWH? (check one) Management Health care professional Service Administrative Researcher Not sure Non-employee
 Did you complete your family history using the Surgeon General's "My Family Health Portrait"? — Yes (please circle one: I completed it on line on paper) — No If no, please tell us why? — I still plan to do it — Never had time to complete — I was unaware of the project — I was concerned about privacy — I am separated from my family (e.g. adoption) — Other, please explain

If you answered "no" to question #2 you may stop here (or go to https://familyhistory.hhs.gov/ to participate now). Thank you for completing this survey.

If you answered "yes" to question #2, please continue this survey.

3C1. Fall Participation Survey

3.	If you previously returned a survey (e.g. our March 2006 survey) stating that you had not completed your "Family History", what changed since then? (check all that apply) Not Applicable I have since learned more about the project Friends or co-workers have described a positive experience I was encouraged to participate by a family member I am more trusting of the process now New health concern Other, please explain		
4.	Rate the strength of these motivating factors for you in completing your family health history using the Surgeon General's "My Family Health Portrait", with 0 being the least motivating factor and 5 being the most motivating factor:		
	0 1 2 3 4 5 I thought it would be interesting 0 1 2 3 4 5 I thought it would be fun		
	0 1 2 3 4 5 I thought it would be fun		
	0 1 2 3 4 5 I thought it could be beneficial to my health		
	0 1 2 3 4 5 I did it for the sake of a family member		
	if you had a family member in mind, was it		
	a parent		
	a brother or a sister		
	a child		
	other [relationship?] 0 1 2 3 4 5		
	1 vas encouraged by my co-workers or supervisors		
	Other motivation, please explain		
5.	How many times have you returned to your family health history document to add or change information? [circle one] 0 1 2-3 4-5 >5		
6.	Rate the difficulty of each task in completing your family health history, with 0 being the least difficult and 5 being the most difficult?		
	0 1 2 3 4 5 Discussing the subject with family members		
	0 1 2 3 4 5 Discussing the subject with family members 0 1 2 3 4 5 Knowing what questions to ask my family members 0 1 2 3 4 5 Obtaining the health history information		
	0 1 2 3 4 5 Obtaining the health history information		
	0 1 2 3 4 5 Knowing where or how to enter information		
	0 1 2 3 4 5 Using the computer version of the history tool		
7.	Would you encourage others to participate in the BWH Family History Project?		
	Yes No		
	140		
8.	Did you learn anything new about the health of your relatives in the process of completing your family health history? Yes No		
	140		
9.	Did you share anything about your health with a relative in the process of completing/collecting your family health history? Yes		
	No		

3C1. Fall Participation Survey

10.	What did you do with the family health history portrait you created? (check all that apply)
	Kept it to myself
	Shared it with my health care provider
	Shared it with my family members
	which family members did you share it with? [check all that apply]
	a parent
	a brother or a sister
	a child
	a cousin
	other [relationship?]
	Other, please explain
11.	How many relatives did you talk to in completing your family health history?
	(check one)
	None
	1
	2-3
	4-5
	More than 5
12.	As a result of your participation in the Family History Project, did you bring family history information to your healthcare provider?
	Yes
	If yes, please estimate your provider's interest, with 0 being the
	least interested and 5 being the most interested: 0 1 2 3 4 5
	No
	If no, please tell us why:
13.	If you answered yes to #12, please check all of the following that occurred:
	(check all that apply)
	Discussion
	Recommendation of specific lifestyle changes
	Genetic testing
	Medical testing other than genetic testing
	Referral to a consultant [check all that apply]
	Genetic Counselor
	Medical Geneticist
	Oncologist
	Gastroenterologist
	Cardiologist
	Endocrinologist
	Ophthalmologist
	Other, please specify
	Nothing, we did not even discuss it
14.	Are you interested in having a genetics professional (a genetic counselor or
	medical geneticist) review your family health history with you?
	Yes
	If yes, please provide your contact information:
	No

3C1. Fall Participation Survey

•	BWH Family History Project staff member contact you to discuss further ons related to your participation in this project? Yes No
	[If you answered "yes," please provide your contact information:
16. Have y	you heard of the Surgeon General's Family History Initiative? Yes No (Go to 19)
•	answered "yes" to question 16, when did you first hear about the Surgeon Family History Initiative? Before I heard about the BWH Family History Project After I heard about the BWH Family History Project
18. Where history?	did you first hear about the importance of collecting your family's health Television Newspaper Magazine Health Professional BWH Family History Project Surgeon General's Family History Initiative

THANK YOU FOR COMPLETING THIS SURVEY!

If you have questions please contact us at 617-525-4777 or familyhistoryproject@partners.org or check out our websites at: www.brighamandwomens.org/FamilyHistoryproject/introduction.asp www.bwhpikenotes.org/familyhistoryproject/introduction.asp

If you would like to return your completed survey by interoffice mail, please send it to:

Family History Project BWH Genetics Division NRB 466E

If you would like to return this by email, please attach it to an email and send to: familyhistoryproject@partners.org

Appendix 4C. Website Visits and Page Views

The project's Senior Programmer worked with the NHGRI's Information Technology staff to generate a listing of the number of visitors to the different project websites.

- [1] Listing of Hits to "My Family Health Portrait" from Partners computers
- [2] Listing of Hits to Brigham and Women's Hospital Family History Project Internet Website

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My Family Health Portrait

Logons from Partners Computers: November 2005 - June 2007

http://familyhistory.hhs.gov

	PARTNERS		RS BIDMC	
Month	visits	views	visits	views
Nov 05	228	3,013	42	122
Dec 05	119	2,193	61	398
Jan 06	98	2,198	22	62
Feb 06	77	1,414	58	178
Mar 06	489	10,627	51	352
Apr 06	87	2,763	51	224
May 06	100	3,225	31	96
Jun 06	136	2,993	49	185
Jul 06	143	5,114	33	87
Aug 06	92	2,549	41	89
Sep 06	79	2,556	33	80
Oct 06	97	2,462	35	140
Nov 06	324	6,218	60	154
Dec 06	42	1,231	25	67
Jan 07	18	319	59	239
Feb 07	11	120	40	165
Mar 07	17	784	19	29
Apr 07	19	471	48	81
May 07	15	225	48	160
Totals:	2,191	50,475	806	2,908

Visit = A unique computer address

View = How many pages the computer address visited

BIDMC is a comparable academic medical center in Boston. BIDMC did not have any specific program to engage employees in the use of the US Surgeon General's web-based tool and is shown here as a control for the basal activity that could be expected for this time period at this kind of institution.

4C2. Listing of Hits to BWH FHP Internet Website



BWH FHP Webpage

Vistis to the Project Web Page July 2006 - October 2006

www.brighamandwomens.org/familyhistory

	New Vistors	Total Visits
Month	visits	visits
Jul 06	25	36
Aug 06	106	229
Sep 06	115	175
Oct 06	155	226
Nov 06	530	774
Dec 06	396	719
Jan 07	367	731
Feb 07	362	727
Mar 07	415	733
Apr 07	295	311
May 07	288	300
Jun 07	316	343
Jul 07	230	414
Aug 07	298	659
Sept 07	361	660
Oct 07	288	487
Totals:	4,547	7,524

Appendix 5C. Feedback to "My Family Health Portrait" Site

Data collection for the BWH FHP included feedback on the usability of the U.S. Surgeon General's "My Family Health Portrait" tool and the outcomes of bringing this information to health care providers. Throughout the project, feedback was continually generated on the usability of the U.S. Surgeon General's "My Family Health Portrait" tool and the outcomes of bringing this information to health care providers.

This collection of data has not only allowed for continued improvement of the webbased tool, but it will also facilitate the understanding of what health care "consumers" and providers need to start building a robust system for patient data entry and health care provider-reviewed family health history information in an electronic format. •

Feedback on "My Family Health Portrait" Web Based Tool

The employee users of the Surgeon General's Web tool have been encouraged to communicate with the project staff (via direct communication, email or telephone) with ideas regarding ways to improved the usability of the site.

Listed below are a series of communications between our project team member (Peter Zumphe) and the NHGRI usability group.

1). Add a primary key field

Category: Enhancement request

Rationale: Will be needed to facilitate bi-directional transferring and updating of data stored in the patient's electronic medical record should the patient chose to do so. It is also useful meta-data to indicate the number of problems that users encounter and the order in which relatives are entered and the number of times users need to delete and start again. This information can be used to enhance the intuition users have in entering data.

Comment: Can then also tell how often relatives have needed to be deleted and re-entered.

Resolution: Pending - discussed with Lynn Baumeister

2). Inclusion of an automated email option

Category: Enhancement request

Rationale: While there is reference to sending a file with the proband re-defined to another relative(s), some mention should be made as to how 'right-clicking' on the stored file can be used to email the file using the "send to" option, at least on the Microsoft platforms.

Comment: This is probably difficult to accomplish with html programs on differing platforms.

Resolution: Discussed with Lynn Baumeister

3). Inclusion of a Patient Current Questions Fields

Category: Enhancement request

Rationale: Since it is often recommended that patients bring a list of their questions with them to their provider, it would seem natural to attempt to use this as an additional incentive for patients to include this as part of their family history. The more incentives we can tag to the family history program the better

5C. Feedback to "My Family Health Portrait" Site

Comment: Can use the same field structure as the "other diseases field"

Synonyms:

- Problem list
- Chief complaint
- Past diseases and concerns
- Current anxieties about future heath concerns

Outcome: Pending - proposed to Lynn Baumeister

4). Save_info Screen

Category: Enhancement request

Rationale: The process seems to not have any options so why not just have the script run.

Outcome: Discussed at length with Lynn Baumeister, will need to present again.

5). Eliminate Prominence of Delete Relative controls (1426)

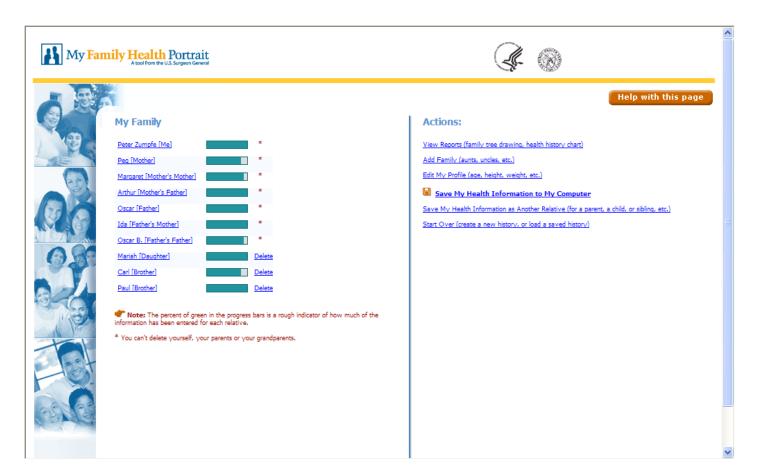
Category: Enhancement request

Rationale:

- These controls are way too prominent as though deleting is the most often used functionality
- Recommend replacing 'delete' with 'edit'

Resolution: pending

- Discussed with Lynn Baumeister
- In progress



6). Apply HL7 field naming conventions

Category: Enhancement request

Rationale:

- · Will enhance future interoperability and inclusion into electronic medical records
- · Facilitate normalization of the data
- · Easier integration into current and future data schema

Outcome: Not submitted

5C. Feedback to "My Family Health Portrait" Site

7). Inclusion of an Hypothetical Pedigree

Category: Enhancement request

Rationale:

- Sample pedigree displaying both common and uncommon entries.
- Model for participants to use
- Participants can call it up to see how to enter information
- Twins
- Known family genetic syndromes
- · Half brother and sisters
- · Other diseases
- How to make corrections section after initial submission to pcp

Resolution: Pending - discussed briefly with Lynn Baumeister

8). Inclusion of Patient Med list

Category: Enhancement request

Rationale

- Will confirm / suggest existence of other related conditions
- Another incentive for the patient to complete before visiting a clinician

Resolution: Pending - discussed briefly with Lynn Baumeister

9). Screen enhancements

Category: Enhancement request

Rationale:

- Non-Scrolling screens and frames i.e. entire frame fits on screen
- · Any control buttons in a frame should always be visible without scrolling
- Reduce the prominence of the 'Delete relative' button caption and/or change caption to 'Edit'

Resolution Pending - discussed with Lynn Baumeister

10). Last_update field

Category: Enhancement request

Rationale: Emphasize for the clinician that new or changed data is present.

Outcome: Initial proposal

11). Leaving edits to save family history

Category: Enhancement request

Rationale:

Currently need to page through each person unless you know to click on the bottom most person in the family.

Resolution: pending

- · Discussed with Lynn Baumeister
- Already under discussion in process

Comments: Add a finished editing button

12). Save File To: - Help Topic(1460)

Category: Enhancement request

Rationale:

• Adoption of more explicit recommendations for storing/retrieving the local file

Outcome: Pending - discussed with Lynn Baumeister

13). Expanded goal and functionality explanation

Category: Enhancement request

Rationale:

- Will help prompt /elicit critiques on topics particularly from users involved in health care.
- Brief references to more topics more likely to 'snag' someone's interest or 'hot button'

Resolution: Pending submission

14). Relaying other disease info on chart

Category: Enhancement request

Rationale: Currently it is possible to highlight one standard or non-standard disease within a pedigree chart. Would it be possible to add one or more non-standard diagnoses to the pedigree chart.

Resolution:

- Pending submission
- First mentioned on 2/21/2006

Appendix 6C. Single Question Survey

Since there was no direct measure of participation during this project, we elected to get a final estimate of participation based on a single question survey.

The question of "Have you spent time in the last year gathering and/or organizing any aspect of your Family Health History?" was widely distributed to 12,767 BWH employees via a single all user email on November 8, 2006.

Employees could respond by clicking "yes", "no" or "I will prior to November 30th" and then hitting submit.

During the survey period [11-08 to 12-07-06] we received 1324 responses (10.5% response rate). Thirty six percent (N=482) said that they had performed Family History work during the project, and 61% (N=818) said that they had not. An additional 3% (N=43) said that they had not yet, but would prior to the end of the month. Those who responded in this manner had the option to then click immediately to the U.S. Surgeon General's site if they wished. A follow up on this group in January 2007 showed that 39% went on to complete family history gathering as they planned in that time interval while 61% still had not participated.

A paper version of this same ballot was distributed to approximately 100 employees who did not have email access as part of their jobs. In this sample 50% said that they had participated in family history gathering. This 50% participation, while reassuring that we had reached across the digital divide with these particular employees, was a likely overestimate of participation by non-email using employees since the 100 surveyed were in previously identified groups in whom there had been project outreach.

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6C. Single Question Survey

