

The Trail of the BRFSS Non-respondent

Mail Follow-up for Non-respondents: Hawaii BRFSS Experience

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Acknowledgement

- Hawaii Dept. of Health

Hanh Nguyen

Shu Liang

Susan Jackson

- SMS (contractor)

Hersh Singer

James Dannemiller

Marco Morawec

Portia Camp

Connie DePeralta

Outline

- Preparation
- Contractor's tasks
- DOH behind the scene
- Actual mail-out
- Mail out status
- Data quality
- SAS code example
- Conclusions
- Recommendations

Preparations

Started mid-December 2008

- 1) Prepare Contract
 - Identify Contractor's tasks

- 2) Communication
 - a) BSB/CDC
 - b) Contractor

Contractor's Tasks

1. Redesign the questionnaire, scan results individual elements process and pass through the CDC/PC edit.
[BSB/CDC drafted mail questionnaire 02/06/2009](#)
2. Design follow up reminder postcard.
3. Identify the records that will be follow-up so it can be rematch with the original landline.
4. Start of mail-out: 3rd week of March or 2nd week of April .
5. Include incentive or not
6. Send the questionnaire to Household.

Contractor's Tasks - Questionnaire Redesign

1. Used BSB initial mail questionnaire draft as basis for the redesign.
2. Changes to the BSB version
 - a) **next** birthday to most **recent** birthday
 - b) used both the “**Go to**” and “**Skip to**”
 - c) added one question

How many active cell phone numbers do you have in this household?

Contractor's Tasks - Questionnaire Redesign Cont.

d) Appearance

No border

Questions presented in two column format



P.O. BOX 3378
HONOLULU, HAWAII 96801-3378

May 5, 2009

CHIYOME LEBANALA FUKINO, M.D.
DIRECTOR OF HEALTH

10 0001 0000 0001 00
000

BRFSS Behavioral Risk Factor Surveillance System

Aloha,

This questionnaire is designed to gather important information about the health and health practices of adults. The information is kept confidential and is used only to evaluate health programs and to plan future action to improve the health of citizens in the state.

We are asking that an adult in the household complete this health survey. The survey should only take approximately 10-20 minutes to finish. Please return the completed survey in the enclosed pre-paid envelope. We have asked SMS Research to keep tally of the results. Please place your completed questionnaire in the envelope provided and send as soon as possible.

Although answering the health survey is voluntary, participation is important for the results to truly represent your state's population. The adult who completes the survey will answer questions about their own health and health knowledge. Any question this person does not want to answer can be skipped. The information provided will be kept strictly confidential and your household will never be identified in any reports.

For more information about this study or about how to complete the survey, please call 1-888-502-7377.

Together we can work for a healthier Hawaii. Thank you for your help.

Sincerely,

Chiyome L. LeBanala Fukino, M.D.
Director of Health

What is today's date?

Month - Day - Year

Month

Day

Year

SEQNO. 00000000

J2b. On days when you do moderate activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?

Hours and Minutes Per Day

J3. Now, thinking about the vigorous activities you do in a usual week, do you do vigorous activities for at least 10 minutes at a time, such as running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate?

- Yes ⇒ Go to J3a
- No ⇒ Skip to K1
- Don't know/Not sure ⇒ Skip to K1

J3a. How many days per week do you do these vigorous activities for at least 10 minutes at a time?

Days per week

If you do no vigorous physical activity for at least 10 minutes at a time ⇒ Skip to K1

J3b. On days when you do vigorous activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?

Hours and Minutes Per Day

K. HIV/AIDS

IF AGE 64 OR YOUNGER GO TO K1.

IF 65 YEARS OLD OR OLDER SKIP TO SECTION L: Emotional Support.

The next few questions are about the national health problem of HIV: the virus that causes AIDS. Please remember that your answers are strictly confidential and that you do not have to answer every question if you do not want to. Although we will ask you about testing, we will not ask you about the results of any test you may have had.

K1. Have you EVER been tested for HIV? Do not count tests you may have had as part of a blood donation. Include tests using fluid from your mouth.

- Yes ⇒ Go to K1a
- No ⇒ Skip to K2
- Don't know/Not sure ⇒ Skip to K2

K1a. Not including blood donations, in what month and year was your last HIV test?

Month and year

K1b. Where did you have your last HIV test: at a private doctor or HMO office, at a counseling and testing site, at a hospital, at a clinic, in a jail or prison, at drug treatment facility, at home, or somewhere else?

- Private doctor or HMO office
- Counseling and testing site
- Hospital
- Clinic
- In a jail or prison (or other correctional facility)
- Drug treatment facility
- Home
- Somewhere else
- Don't know/Not sure

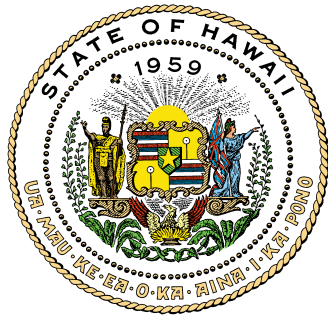
If you did get your last HIV test within last 12 months, please continue. Otherwise ⇒ Skip to K2

K1c. Was it a rapid test where you could get your results within a couple of hours?

- Yes
- No
- Don't know/Not sure

Contractor's Tasks – Design of Reminder Postcard

***Please remember to
fill out your survey!***



Thank You!

SMS Research • 1042 Fort St Mall, Ste 200 Honolulu 96813

Example Address
Example PO BOX
HONOLULU, HI 99999

Aloha,

We sent you a survey about a week ago, to gather important information about the health and health practices of adults.

This is a friendly reminder to fill out the survey and send it back to SMS Research. Please make use of the provided business return envelopes enclosed with the survey.

In case you did not receive a survey or lost your survey, please do not hesitate to call Marco Morawec at (808) 440-0737. He will send you another copy immediately.

Mahalo for your participation in helping make Hawaii healthier.

Sincerely,

A handwritten signature in black ink, appearing to read "Chiyome L. Lu'aua Fukino, M.D.".

Chiyome Lu'aua Fukino, M.D.
Director of Health

Records for Mail Follow-up

Disposition codes

- 210=** '210: Hang up/Termination between questionnaire '
- 220=** '220: Refusal after respondent selected '
- 230=** '230: Selected respondent never reached '
- 240=** '240: Selected respondent away from home '
- 250=** '250: Language problem with selected respondent '
- 260=** '260: Health problem with selected respondent '
- 270=** '270: Hang up with recorded # adults, but before resp. selection '
- 280=** '280: Recorded # adults without resp. selection '
- 305=** '305: Hh. members away from home '
- 310=** '310: Hang up, unknown if eligible resp. '
- 315=** '315: Contact, unknown if elib. resp. '
- 320=** '320: Language prob. before resp. selection '
- 325=** '325: Health prob. before resp. selection '
- 330=** '330: Hang up, unknown if private residence '
- 332=** '332: Contact, unknown if private residence '
- 335=** '335: Answering machine, Private residence '
- 340=** '340: Tel. tech. barrier, Private residence '
- 345=** '345: Answering machine, Unknown if Private residence '
- 350=** '350: Tel. tech. barrier, Unknown if Private residence '
- 355=** '355: Phone status changed from Hh. to non-working '
- 360=** '360: No answer '
- 365=** '365: Busy '
- 370=** '370: On Never call list '
- 405=** '405: Out of state

Records for Mail Follow-up: Addresses from Genesys

- Address file no **sequence** number, get it.
 - > Use Genesys sample file **replib** and **repdepth** to **match** the address file
 - > Save match file, condition precall=1
 - > Sort by sequence number
- Match with non respondent file by sequence number.

Sequence number is key to merge later in the landline sample.

DOH Behind the Scene

- Feedback to questionnaire design
- Assign variable name to each item in the mail out.

Decided to use the BRFSS CI3/WINCATI variable name

Ex: 1. How many adults, age 18 or older, live in this household? **Note:** Please include yourself. [[numadult](#)]

- Test

Actual Mail-out

- No incentive included
- Follow-up using post card

	DATE MAILED OUT		ACTUAL NUMBER MAILED OUT	
Month	Questionnaire	Postcard	Questionnaire	Postcard
April	15-May	4-Jun	1524	798
May	19-Jun	13-Jul	841	841
June	16-Jul	27-Jul	838	796
July	20-Aug	26-Aug	880	799
August	18-Sep	24-Sep	832	812

Mail Out Status - Response

	RETURNED		SCANNED		Crude RESPONSE	Mail-out Specs
Month	ACTUAL	VALID	ACTUAL	VALID		
April	351	351	351	190	20%	bulk, DOH envelope
May	146	146	146	146	17%	first-class, SMS
June	156	156	156	156	19%	Bulk, SMS Envelope
July	207	207	207	207	24%	First-class, DOH envelope
August	157	157	157	157	19%	Bulk, SMS Envelope

Note: April is a special case

Mail Out Status - Response

- Completing the mail questionnaire more likely for households that were contacted than not contacted, i.e., disposition codes in the 200 series vs. 300 to 400 series.

DISPOSITION CODE	STATUS	#	%	95% C.I.
Household contacted (210-300)	Mail back	298	26.4	(23.9-29.0)
	No Answer	829	73.6	(71.0-76.1)
	Total	1127	100.0	
Not contacted (300-405)	Mail back	352	18.4	(16.7-20.2)
	No Answer	1558	81.6	(79.8-83.3)
	Total	1910	100.0	

Mail Out Status – Invalid Address

- Variability of invalid addresses (addresses not found or resident no longer live there) by geographic area.

STATUS	HONOLULU			HAWAII			KAUAI			MAUI		
	#	%	95% C.I.	#	%	95% C.I.	#	%	95% C.I.	#	%	95% C.I.
Invalid Address	27	6.0	(3.8-8.2)	26	23.6	(15.6-37.1)	28	16.5	(10.8-22.1)	72	31.3	(25.3-37.3)
Mail back	123	27.5	(23.3-31.6)	23	20.9	(13.2-28.6)	33	19.4	(13.4-25.4)	37	16.1	(11.3-20.9)
No Answer	298	66.5	(62.1-70.9)	61	55.5	(46.0-64.9)	109	64.1	(56.8-71.4)	121	52.6	(46.1-59.1)

- Invalid addresses more likely to be in household with landline disposition codes 300 and above, i.e. no household member contacted.

MONTH	DISPOSITION CODE)		Total Invalid address
	Household contacted (210-280)	Not contacted (305-405)	
APRIL	2 16.67	10 83.33	12
JULY	42 28.97	103 71.03	145
Total	44	113	157

Intended Respondent Respond?

75% consistent answer (male male, female female)

21% no answer (19% for question 2., 2% for question D24.)

If more than one adult lives here, the one with the *most recent birthday* should complete the survey.

2. Is the adult with the *most recent birthday* male or female?

- Male
- Female

Please ask the person with the most recent birthday to complete the survey, starting with question A1. If you have any questions, please call **1-888-502-7377**.

Respond check against

D24. Please indicate your sex:

- Male
- Female

Example of Scanned Completed Questionnaire

LINDA LINGLE
GOVERNOR OF HAWAII



P.O. BOX 3378
HONOLULU, HAWAII 96801-3378

CHIYOME LEINAALA - FUKINO, M.D.
DIRECTOR OF HEALTH

If reply, please reply to:
Title:

BRFSS Behavioral Risk Factor Surveillance System

TO THE HONG FAMILY
1585 ONIPAA PI.
HONOLULU, HI 96819

September 17, 2009

This questionnaire is designed to gather important information about the health and health practices of adults. The information is kept confidential and is used only to evaluate health programs and to plan future action to improve the health of citizens in the state.

We are asking that an adult in the household complete this health survey. The survey should only take approximately 10-20 minutes to finish. Please return the completed survey in the enclosed pre-paid envelope. We have asked SMS Research to keep tally of the results. Please place your completed questionnaire in the envelope provided and send as soon as possible.

Although answering the health survey is voluntary, participation is important for the results to truly represent your state's population. The adult who completes the survey will answer questions about their own health and health knowledge. Any question this person does not want to answer can be skipped. The information provided will be kept strictly confidential and your household will never be identified in any reports.

For more information about this study or about how to complete the survey, please call 1-888-502-7377.

Together we can work for a healthier Hawaii. Thank you for your help.

Sincerely,


Chiyome Leinaala-Fukino, M.D.
Director of Health

What is today's date?

09 - 29 - 2009
Month Day Year

SEQNO: 2009044920

J2b. On days when you do moderate activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?

02 : 00 Hours and Minutes Per Day

J3. Now, thinking about the vigorous activities you do in a usual week, do you do vigorous activities for at least 10 minutes at a time, such as running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate?

- Yes ⇒ Go to J3a
- No ⇒ Skip to K1
- Don't know/Not sure ⇒ Skip to K1

J3a. How many days per week do you do these vigorous activities for at least 10 minutes at a time?

Days per week

If you do no vigorous physical activity for at least 10 minutes at a time ⇒ Skip to K1

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- Yes ⇒ Go to K1a
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- Don't know/Not sure ⇒ Skip to K2

K1a. Not including blood donations, in what month and year was your last HIV test?

/ Month and year

K1b. Where did you have your last HIV test: at a private doctor or HMO office, at a counseling and testing site, at a hospital, at a clinic, in a jail or prison, at drug treatment facility, at home, or somewhere else?

- Private doctor or HMO office
- Counseling and testing site
- Hospital
- Clinic
- In a jail or prison (or other correctional facility)
- Drug treatment facility
- Home
- Somewhere else
- Don't know/Not sure

If you did get your last HIV test within last 12 months, please continue. Otherwise ⇒ Skip to K2

K1c. Was it a rapid test where you could get your results within a couple of hours?

- Yes
- No
- Don't know/Not sure

Data Quality – Respondent Entry

- Variety of configurations for write-in reply

On days when you do moderate activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?

: Hours and
 Minutes Per Day

# of MODERATE PHYSICAL ACTIVITY	
MODPATIM	Frequency
0	5
1	12
2	2
3	3
4	4
5	1
6	1
7	1
8	1
10	12
11	1
500	2
545	1
600	6
607	1
610	1
630	2
700	1
800	5
830	1
900	1
1000	1
2000	1
4500	1
6000	1

Did not do moderate exercise for at least ten minutes, answered anyway.

Moderate activity for five hours and some have more than 24 hours of moderate PA?

Example of Write-in and Check Box

			fruitn	fruitu						
			Number of Times:		(Choose one)					
			Per Day	Per Week	Per Month	Per Year	Never	Not sure		
EXAMPLE: Carol drinks juice 9 times per month. Her answer would look like: →			0	9	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a. How often do you drink fruit juices such as orange, grapefruit, or tomato?					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Not counting juice, how often do you eat fruit?					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
fruitn	fruitu	Frequency			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	2	1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	3	1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	5	3			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	4	1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35	2	1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35	3	1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40	3	1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90	3	1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Zero for 'how often do you eat fruit', yet has unit of measure.

Is it likely that respondent remembered eating fruits 90 times per month, rather than saying 3 fruits per day?

SAS Code Example

- Leading zeroes to be inserted for variables that occupied two or more columns (following the landline format).
- Unlike the CATI, two variables for coding the numeric entry and the unit of measure.
- Combine to get one variable **Fruitjui**

Note: Wrong decision to use the BRFSS WINCATI variable names.

Reason: No need for these SAS codes.

```
fjuicn = c18q01_a;  
fjuicu = c18q01_b;  
wt_lbs = c12q11_a;  
wt_kg = c12q11_b;  
MODPATIM= c19q04;
```

SAS Code Example Cont.

```
*fruits and vegetables;
length FRUITJUI $3 FRUIT $3 GREENSAL $3 POTATOES $3 CARROTS $3
VEGETABL $3;
array often(6) fjuicn fruitn gsaln potan carrotn vservin;
array unit(6) fjuicu fruitu gsalu potau carrotu vserviu;
array fv(6) FRUITJUI FRUIT GREENSAL POTATOES CARROTS VEGETABL;
do i=1 to 6;
  if unit(i) > 0 and often(i) > 0 then do;
    if often(i) > 0 and often(i) < 10 then fv(i)= trim(left(unit(i))) || '0' ||
left(often(i));
    else if often(i) >=10 then fv(i)= trim(left(unit(i))) || left(often(i));
  end;
  else if unit(i)=. then do; if often(i) > 0 and often(i) < 10 then
    fv(i)= '7' || '0' || left(often(i));
    else if often(i) >=10 then fv(i)= '7' || left(often(i));end;
  else if unit(i) > 0 and often(i)=. then fv(i)= trim(left(unit(i))) || '77';
end; /*do loop*/
```

Conclusions

- Time involved
 - > in preparation/design of questionnaire
 - > monitor and examine initial send/results
 - > absence of optional modules, state added questions
 - > lack of control in written responses (data quality)
 - > editing program to conform to BSB ascii file layout
- Addresses are not always found or resident moved out
- Reach the target respondent?

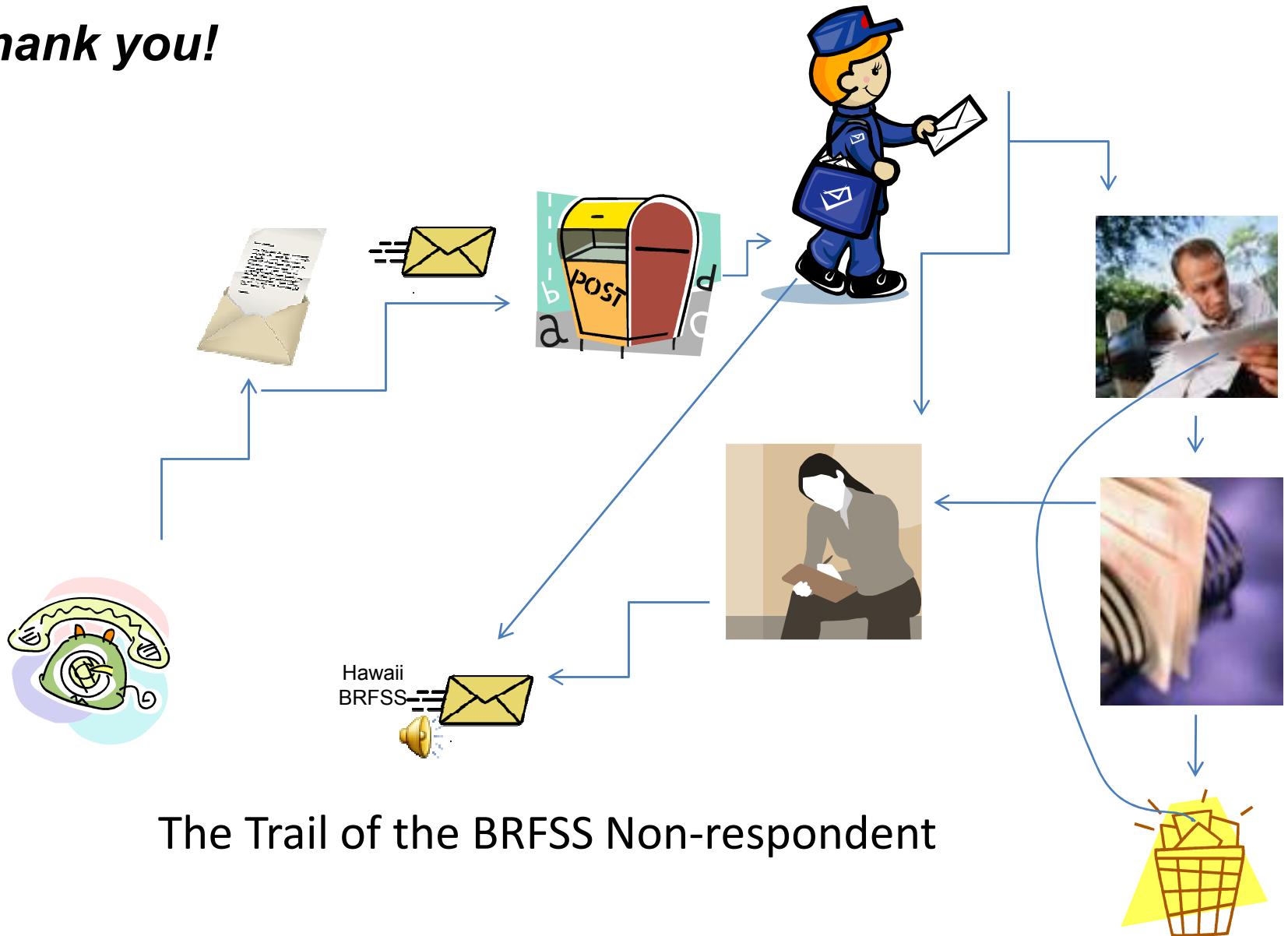
Conclusions

- Absence of unnerving phone call, but now unnerving mailroom clerk
- Relatively high response rate
- Help USPS economy

Recommendations

- Minimized written answers
 - Conduct focus group
- Revised procedures depending on initial outcome
- Use the public health agency envelope to send, not the contractor's for higher response rate.
- Track invalid addresses to compute for real response rate (number that answered/#(mail out – returned)).
- Decide on definition of non-respondent.
- Same month mail-out as landline possible only if mail questionnaire is prepared much earlier and CATI is designed to flag records with addresses.

Thank you!



The Trail of the BRFSS Non-respondent