

Lessons Learned from Replacing an RDD Sample with an Address-Based Sample for a Telephone Survey

Chad Kniss

UW Survey Center
University of Wisconsin Madison
ckniss@ssc.wisc.edu

Paper presented at the annual meetings of the
International Field Directors and Technology Conference
Providence, RI
19-22 May 2013

© 2013. Materials may not be reproduced without permission of the author.

Outline for this presentation

- Brief background on the Family Health Survey (FHS)
- Implementation of Address Based Sample
- Review of outcomes from 2012 FHS
- Comparison of outcomes with 2011 FHS

FHS Background

What is the Family Health Survey (FHS)?

The FHS is a statewide population health survey focusing on:

- Health status
- Health practices
- Insurance coverage
- Access to and utilization of health care services

The FHS is a household-level survey, we collect data about **all** household members: including adults, children, relatives, and any non-relatives.

Selection of respondent based on self-reported knowledge

Previous FHS Sample

FHS sample has been RDD telephone sample

- Landlines only for over 30 years
- Stratified RDD
 - eight strata – geographical and minority emphasis
- Overall goal was approximately 2,400 interviews
- Sample was drawn quarterly
- Order enough sample from vendor meet goal
- Immediately field replicates of sampled phone numbers

Sampling Issues in the Current Communications Environment

- RDD, landline frame only, misses 30% to 35% of households
 - Leads to under representation of younger respondents & households, renters, etc.
- RDD, cell phone frame, one means of adding coverage
 - Benefits: Increasing coverage, adding younger respondents
 - Issues: Overlapping coverage, increase sample size, and, lack ability to specify local geographies
- Address Based sample, another means of increasing coverage
 - Benefits: nearly full coverage of households, specific geographic information, ability to increase contacts via different modes
 - Issues: sampling locations not phone numbers need to obtain phone numbers for address, ability/need to do mix-mode data collection

2012 FHS Sample

2012 Utilized an Address Based Sample (ABS)

- All residential addresses in WI were deemed eligible, except those flagged as seasonal and institutional
- Stratified random sampling of addresses – six strata
- Decided to use a single mode of data collection via telephone
 - Timing and costs
- Overall goal to complete approximately 1,800 interviews
- Addresses sampled once (August 2012)
- Estimated a need of 4,000 addresses sampled
 - Vendor matched a name & a telephone number to address
 - 84% were matched to a name
 - 52% were matched to a telephone number

Implementing an Address Based Sample in 2012

ABS lead to two processes to reach the desired outcome

- 52% of cases matched to a telephone number by vendor
 - sent an advance letter with an incentive (\$2)
 - sent to call center to attempt within one week
 - no post-incentive offered
- 48% of cases needed a telephone number
 - used an abbreviated Dillman approach with a one page mailed SAQ, including a pre-incentive (\$2 bill)
 - also a promise of a post-interview (\$20 check)
 - returned SAQs with a telephone number sent to call center

Wisconsin Family Health Study

Thank you for your help! Please have the adult living in your household who knows the most about health and health insurance answer these questions. The answers will give us important information about health insurance in Wisconsin. We are asking these questions of people across Wisconsin, including older adults, families with children, and people who live alone. It is your choice whether you answer these questions or not. Your answers will be kept private and secure.

1. What is the name of the county that you live in?

2. Is this address your main or year-round home, a vacation home, or is this address not a residence?

- Main or year-round home
 Vacation or second home
 Not a residence

3. This question is about health insurance. It can be insurance from a job or employer; BadgerCare Plus, Medicaid, ForwardHealth, Medicare or other government programs; or insurance you pay for yourself.

Think about yourself and everyone living in your household. Mark the one sentence below that best describes who has health insurance now:

- Everyone living here has health insurance.
 Some of us have health insurance and some of us do not.
 No one living here has health insurance.

4. Think about all the types of telephone numbers used by people who live in your household.

a. How many are landline phone numbers that are wired to your home?

b. How many are cell or wireless phone numbers?

5. We may call you to ask more questions about health and health insurance. If we call you and you do an interview over the phone, you will receive a \$20.00 check to thank you.

a. What is the first name of the adult in your household who knows the most about the health of all the people living in your household?

b. Please give us one or two phone numbers that we can call to reach the person above:

(Area Code) Prefix Suffix

Phone Number 1: () -

Phone Number 2: () -

Process of Fielding 2012 Sample by Vendor Phone Match

Unmatched sample (n=1,923)

- 1st SAQ sent late-August
- Reminder postcard sent one week later
- 2nd SAQ, to non-responders sent mid-September
- Send out thank you letter & post-incentive (\$20) for completing phone survey

Matched sample (n=2,077)

- Sent advance letters
 - randomly split into two replicates
- Refusal conversion letters (sent if needed)
- “Tracing” SAQs for “bad” phones (sent if needed)
 - Returns treated like unmatched cases
 - Then eligible for post-incentive (\$20)

Fielding of 2012 Sample by Vendor Phone Match

Unmatched sample

- 1,923 cases sent SAQs
 - 831 SAQs returned
 - 91.6% had a phone number
- 763 cases attempted to make phone contact
- 574 completed survey

Matched sample

- 2,077 advance letters sent
 - 22.6% sent ref. conv. letters
 - 17.6% sent “tracing” SAQs
- 2,077 cases attempted to make phone contact
- 1,032 cases completed the phone

Overall outcomes for 2012 FHS Data Collection

Outcomes

- Response Rate 44.8% similar to AAPOR Response Rate 3
- Refusal Rate 15.1% similar to AAPOR Refusal Rate 2
- Contact Rate 60.4% similar to AAPOR Contact Rate 2
- Cooperation Rate 74.3% similar to AAPOR Coop. Rate 1

- 30% completed interviews done on a cell/wireless phone
- 68% completed interviews done on a residential phone line

- 96% confirmed lived at sampled address

Outcomes from 2012 FHS by Vendor Phone Match

Unmatched sample (\$20 post)

- Response Rate 43.6%
- Refusal Rate 10.4%
- Contact Rate 54.3%
- Coop. Rate 80.8%

- 8.04 calls / complete

- 65.3% cell only households

- 93.8% confirmed lived at sampled address

Matched sample (only pre \$2)

- Response Rate 55.5%
- Refusal Rate 21.8%
- Contact Rate 77.9%
- Coop Rate 71.8%

- 13.2 calls / complete

- 7.8% cell only households

- 97.5% confirmed lived at sampled address

2012 FHS Respondents by Vendor Phone Match

	Unmatched (N = 574)	Matched (N = 1,032)
Age of Respondent		
Mean	46.07	59.35
Ranges		
under 35 years	33.7%	5.7%
35-49 years	24.8%	18.9%
50-64 years	27.7%	39.0%
65 plus years	13.8%	36.4%
Race of Respondent		
Hispanic	3.3%	1.6%
White, non-Hispanic	80.7%	90.4%
Non-white, non-Hispanic	16.1%	8.1%
Marital Status of Respondent		
Married	40.9%	65.5%
Single, Never Married	30.0%	9.4%
Current Insurance Status of Respondent		
Insured	90.8%	96.0%
Not insured	9.2%	4.0%
Insurance Status of Respondent during the Last 12 Months		
Insured all 12 months	87.3%	94.4%
Insured some of the time	5.9%	2.2%
Never insured	6.8%	3.4%

2012 FHS Households by Vendor Phone Match

	Unmatched	Matched
	(N = 574)	(N = 1,032)
Mean Number of Household Members	2.34	2.40
Have children under 18 years old	33.3%	21.4%
Have adults 65 years old and over	16.4%	40.3%
Households without any Related Members	39.9%	25.1%
Households under Poverty Level	21.6%	7.6%
Own residence	53.7%	85.4%
Rent residence	41.8%	11.4%
Cell phone only households	65.3%	7.8%
All members insured full 12 months	87.7%	92.9%

Comparison of FHS Samples 2011 vs. 2012

2011 FHS

- RDD Landline only
- 23,100 sampled phone numbers
 - 61.6% vendor screened out
- 8,872 phone numbers called
- 2,462 completed interviews
- Data collected over 11 months

2012 FHS

- ABS – residential only
- 4,000 sampled addresses
 - 47% matched to “good” telephone number
- 2,840 phone numbers called
- 1,606 completed interviews
- Data collected over 5 months

Comparison of FHS Data Collection Outcomes 2011 vs. 2012

2011 FHS

- Response Rate 46.7%
- Refusal Rate 41.7%
- Contact Rate 88.7%
- Coop. Rate 52.6%

- 26.8 calls / complete

- 3.0 hours / complete (calling)

- \$67 total cost / complete

2012 FHS

- Response Rate 44.8%
- Refusal Rate 15.1%
- Contact Rate 60.4%
- Coop. Rate 74.3%

- 11.3 calls / complete

- 1.5 hours / complete (calling)
- 0.4 hours / complete (M&DE)

- \$84 total cost / complete

Changing Costs for Data Collection

Decreased Costs in 2012 from 2011

- 37% decrease in field staff hours per complete
- 56% decrease in total sample cost per complete
- 11% decrease in total telephone cost per complete

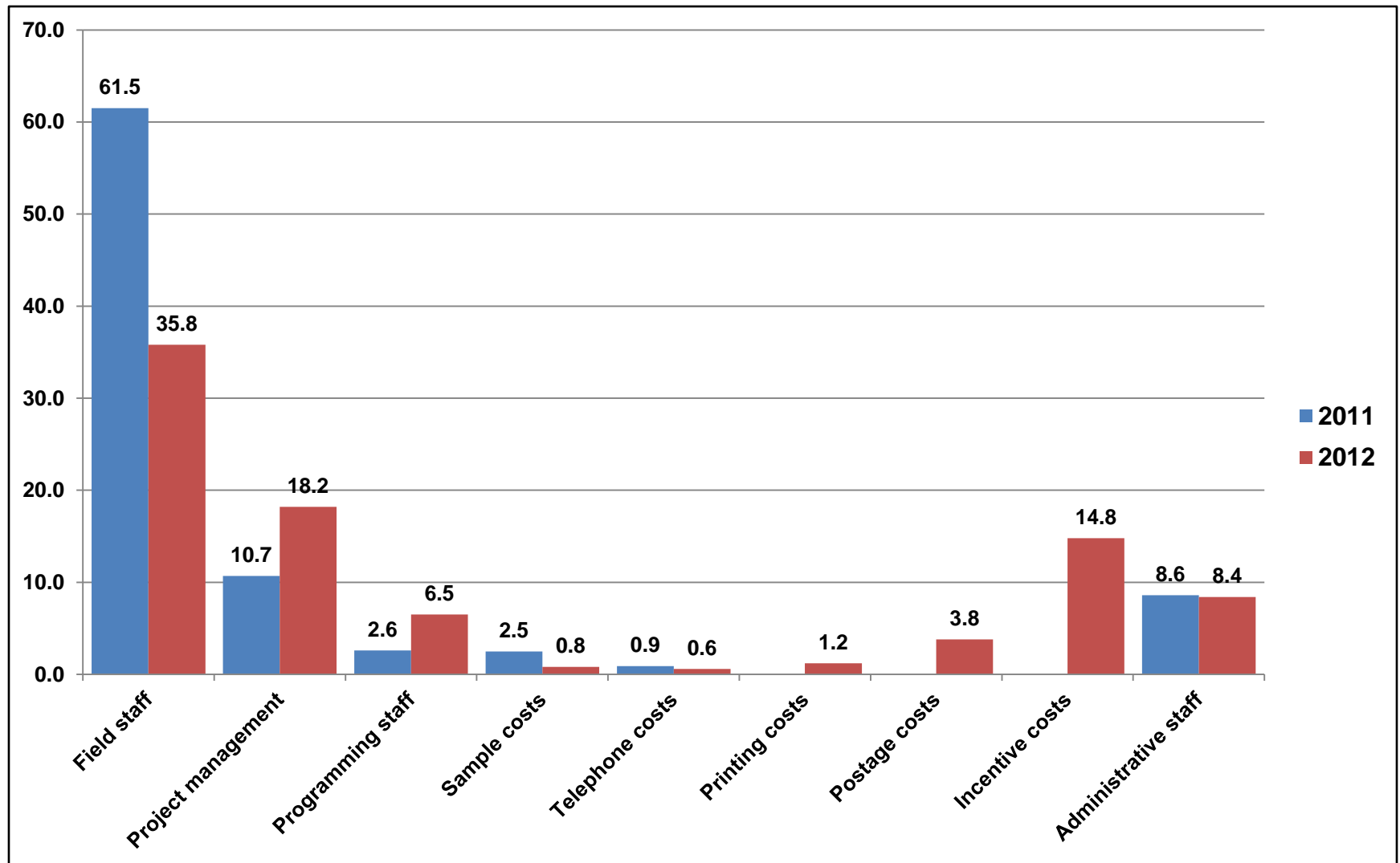
Increased Costs in 2012 over 2011

- 105% increase in project management hours per complete
- 171% increase in programming hours per complete

New Costs in 2012

- Printing \$1,562
- Postage \$5,083
- Incentives \$19,912

Comparison of the Percentages of Total Costs by Category



Conclusions

Fielding an address based sample for a telephone survey presents new challenges & possibilities.

Important questions to consider:

- What contacts & mailings to use?
- How and what incentives to use, if any?
- What about additional mode(s) of data collection?
- Timing of mailings & calling?
- What about weighting the data, adjusting for non-response?
- Need to code sampled cases based on outcomes from the phone contact, mail contacts, or both

Thank You!

For copies of this presentation or more information, contact:

Chad Kniss
ckniss@ssc.wisc.edu

Please visit us at:
www.uwsc.wisc.edu