



Are advanced letters cost effective?

The use of an advance letter to improve survey response for large scale telephone surveys and to reduce data collection costs.

Authors:

Brian Roberson, PhD

Jared Gumbs

Ashley Hyon, MA

Market Decisions Research

M. Davis and Company

Marketing Systems Group

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We would like to extend our thanks to:



For allowing us to conduct this experiment and use their survey data.

Project Background – The Oregon Health Insurance Survey

The Oregon Health Insurance Survey is an important source of information about health care coverage in Oregon.

The survey provides detailed information about the impacts of health system reform, health care coverage, access to care, and utilization.

The survey has been administered every other year since 2011.

Our team administered the survey via telephone in 2017 and 2019.



The average survey length has varied between 26 and 30 minutes.

Project Background – Sampling

The Oregon Health Insurance Survey uses a complex sampling protocol. Sampling stages include:

Geographic stratification based individual counties or county groups:

- 25 geographic strata in 2017
- 19 geographic strata in 2019

Targeted race and ethnic minority oversamples focused on:

- African Americans
- Asian
- Native Americans
- Hispanics and Latinos

Project Background – Sampling

First Stage: A dual-frame listed landline and RDD Cell within each geographic strata



Oversamples were drawn statewide and included targeted landline and cellphone samples.

- Records were households with the “likelihood” that the head of household was in one of the targeted race/ethnic minority populations.
- In practice not many fell in the targeted group

Efforts were also taken to limit the number surveys conducted with residents age 65 and older

- Sample was screened ahead of time based on age of the head of household
- During data collection, a random 50% of contacted households were screened and eliminated if all household members were age 65 and older

Our Sample Sources

Cellular RDD

A probability cellular telephone frame based on 1K Blocks assigned to cellular use.

Geographic assignment is based on Rate Centers which is the basic unit of geography for cellular 1K Blocks and identifies where they are homed.

Listed Landline

A non-probability consumer frame of residential landline phone numbers, name, address and ancillary variables.

Sourced from white page data and credit/purchasing information.

Consumer Cellular

A non-probability consumer frame of cellular phone numbers, name, addresses and other ancillary variables.

- Sourced from credit/purchasing information
- A secondary source appends cellular numbers

Both RDD cell and listed LL were used in the dual frame first stage

Both listed LL and consumer cellular were used for targeted oversamples

Sample Screening

All sample was screened by Marketing Systems Group

The cellular RDD records were screened through Cell-WINS (Cellular Working Identification Number Service) for working status.

- Average active status for OR was 77%

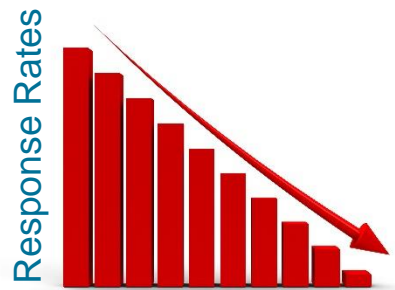
The listed landline samples were screened through Elevate for working status.

- Average active status for OR was 78%
- Oversamples that targeted Asian or African American ethnicity codes had an active status of 85%.

Both screening solutions, even though distinct processes, are both technology-based non-intrusive queries that returns a disposition of either active or inactive.

Rationale for this Experiment

There has been a consistent decline in telephone survey response rates.



This decrease in response rate has led to a sharp increase in costs for telephone survey data collection.



This is especially true for projects using RDD sample and for longer surveys

FOR THIS SURVEY

The complexity of the health insurance survey instrument makes it difficult to administer via other means (such as online or mail).

The increasing data collection costs led us to drop the number of completes from 9,000 in 2017 to 8,000 in 2019.

Our Experiment: The Use of a Pre-notification Letter

Our team worked with the Oregon Health Authority to develop a pre-notification letter to inform selected respondents about the survey.

It was set up as in an FAQ format with questions and answers:

Your household has been selected to participate in the 2019 Oregon Health Insurance Survey! – this indicated their household had been selected.

Who will be calling me? – we gave our company name and call-id information.

What does the survey ask? – we provided a summary of the types of information the survey would gather and reassured respondents that their information would be completely private, and that their answers would be strictly confidential.

Who is sponsoring the survey? – this provided the name of the sponsoring agency and a description of their mission.

Want more information? – the letter provided the name and telephone number of our study director and directed respondents to a project website.

Oregon Health Insurance Survey

c/o Market Decisions Research
P.O. Box 1240
Portland, ME 04104-1240

NAME
ADDRESS 1
City, ST ZIP



Our Experiment: The Sample

- Once generated, Marketing Systems Group (MSG) appended address information to sample information when available.
- All sample records were divided into sample replicates and released weekly.
- Each replicate included records that received a letter and those that did not receive a letter.
- Letters were mailed each Friday to arrive early the next week.
- Sample replicates were then released for calling on Wednesdays.

Appending Contact and Demographic Information to Cell RDD

- MSG ran the cellular RDD files against multiple consumer files containing cellular numbers, names, addresses and age data.
- Name, address and age were appended where available
 - The average append rate for name and address is about 25%
 - The average append rate for age is around 14%

Overall, 32% of sample received a pre-notification letter.

	Landline	Cellphone	Total
Not in mailing	12,046	97,332	109,378
Letter was mailed and delivered	29,476	25,330	54,806
Address was screened out prior to mailing (USPS identified as invalid address)	331	659	990
Letter was returned as undeliverable	1,587	4,310	5,897
Total Sample Records	43,440	127,631	171,071
Percent receiving letter	67.9%	19.8%	32.0%

Our Experiment: Analysis

Call history information was output including:

- The date of calls
- The time of calls
- Call dispositions
- The time spent on each call

This was linked to sample information and survey data

Records were grouped by whether the household had or had not been sent a letter

- All letters returned as undeliverable were included with households that had not been sent a letter

Our Results: What did we find

The letter increased overall survey response rates from 2017 to 2019.

The letter did reduce our data collection costs even with the added costs of printing and mailing the letter

But...

the cost benefits are limited to cellphone sample

Our Results: Survey Response Rates

AAPOR Response Rate 3

	2017	2019	Percentage Point Increase	Percent increase
Overall	13.4%	16.6%	3.2%	23.9%
Landline	21.7%	24.9%	3.2%	14.7%
Cellphone	9.5%	13.8%	4.3%	45.3%

Our Results: The impact on costs

- The pre-notification letter added costs:
 - Printing and postage.
 - It added in some staff expenses to manage the pre-notification letter process
- But it offset other costs:
 - Savings on expenses including sample and long distance
 - Costs for staff time for data collection
 - Staff “opportunity” cost; time that could be used on other projects
- Overall, we found that the additional costs for the pre-notification letter were more than offset by savings, especially in terms of staff time.
 - All the savings came from reducing the costs of conducting cellphone surveys
 - The pre-notification letter did increase the cost of landline surveys.

Our Results: The impact on costs

	Landline	Cell	Total
Cost for pre-notification letter	\$19,880	\$18,970	\$38,850
Savings on Expenses (sample and long distance)	\$734	\$5,413	\$6,147
Reduction in staff hours	410	968	1,378
Reduction in staff costs	\$14,350	\$33,870	\$48,220
Net savings	-\$4,797	\$20,313	\$15,516
Percent savings compared to budget	-2.5%	5.5%	2.8%

Conclusions

Sending a pre-notification letter does increase response rates.

Even with its added expense, letters reduce the overall cost and time of data collection.

Limitations

Most of the savings come from time spent conducting interviews, not hard expenses like sample and phone charges.

The focus on health coverage and access might be an important factor in their likelihood to respond.

A pre-notification letter may be less effective on topics of less interest to respondents.

Further Research

- Adding a token incentive in the letter to determine whether it would further increase response.
 - Would the additional cost be offset by increased response and a reduction in staff time?
- Follow-up letters to non-responders
 - Would sending an additional letter after making initial call attempts raise response and potentially cut costs?
- The use of letters to target groups of high interest or low incidence:
 - Young adults
 - Racial and ethnic minority populations (which are a current focus of this project)



Thank you!

Brian Robertson, Ph.D.
brianr@marketdecisions.com
(207) 767-6440, ext. 102

Jared Gumbs
jared@mdavisco.com
(215)-790-8915

Ashley Hyon, MA
ahyon@m-s-g.com
(610) 994-8321