

*turning knowledge into practice*

## **First Mailings versus Follow-up Mailings: Do the same strategies have the same effects?**

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# Introduction

- The goal is to maximize survey response rates while minimizing costs.
- Research has shown that certain methods are effective at increasing response rates to mail surveys such as incentives, delivery method, etc. (Dillman 2000)
- What strategies are appropriate for a first mailing versus a follow-up mailing? Do they differ?

# Background

- Studies show that stamped return envelopes can elicit higher response rates than business reply mail (Kellerman and Harold, 2001; Shiono & Klebenhoff, 1991; Urban, Anderson, and Tseng, 1993).
- Most studies only tested the use of postage stamps on return envelopes with the first mailing or for the mailings over all – not on follow-up mailings.
- What impact on response rates, if any, do stamps have on nonresponse follow-up mailings and are they still cost-effective?

# Objective

- To test the effects of using stamped return envelopes on an initial survey mailing versus follow up survey mailings.
- Experiment 1, 2007 Survey:
  - Stamps vs BREs were tested on three follow-ups to nonresponders on the survey
  - Initiated as an effort to boost response rates mid data collection
- Experiment 2, 2008 Survey:
  - Experiment was repeated on the initial mailing in order to compare the effects of the experiment for different mailings during the data collection process.

# Experiment 1: Methods

- Physician survey is one component of the *U.S. News & World Report* “America’s Best Hospitals” rankings.
  - Random sample of 3,400 board certified physicians stratified into 4 regions and 17 specialties.
    - An additional 900 pediatricians surveyed in 2008
  - Physicians are asked to nominate up to 5 hospitals that provide “the best care...” associated with their medical specialty.
  - All response rates calculated using AAPOR Standard RR6 (undeliverables treated as ineligible).

# Experiment 1: Materials

## Front

**America's  
Best Hospitals**

THIS SURVEY OF PHYSICIANS' JUDGMENTS PROVIDES THE BASIS FOR THE REPUTATION COMPONENT OF THE ANNUAL RANKING OF HOSPITALS FOR U.S. NEWS & WORLD REPORT.

  
INTERNATIONAL  
Research Triangle Institute

① Please list in the spaces below, the five hospitals (and/or affiliated medical schools) in the United States that you believe provide the best care for patients with the most serious or difficult medical problems associated with neurology and neurosurgery, regardless of location or expense (we've provided space for the hospitals and/or affiliated medical schools in hopes that will make it easier to provide your answer):

Hospitals and/or affiliated medical schools that provide the best care	City	State
a. <input type="text"/>	<input type="text"/>	<input type="text"/>
b. <input type="text"/>	<input type="text"/>	<input type="text"/>
c. <input type="text"/>	<input type="text"/>	<input type="text"/>
d. <input type="text"/>	<input type="text"/>	<input type="text"/>
e. <input type="text"/>	<input type="text"/>	<input type="text"/>

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## Back

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# Experiment 1: Schedule

## 2007 Survey:

<b>Mailing</b>	<b>Sent via</b>	<b>Interval</b>	<b>Envelope</b>
1	USPS, first-class letter	Initial mailing	Business reply only
2	USPS, first-class letter	Three weeks	Business reply only
3	Priority mail	Two weeks	Business reply versus stamped
4	Federal Express	Three weeks	Business reply versus stamped
5	USPS, first-class letter	Five weeks	Business reply versus stamped

# Experiment 1: Methods

Compared three types of postage:

1. Traditional postage-paid business reply mail,
2. A standard 39-cent first-class postage stamp of an American flag,
3. A 45-cent breast cancer research stamp.

## Sample Distribution

<b>Experimental Group</b>	<b>Distribution n (%)</b>
Business reply envelope	1226 (50%)
American flag stamped return envelope	612 (25%)
Breast cancer stamped return envelope	612 (25%)

Total =2450

# Experiment 1: Materials

## Breast cancer research stamp



# Experiment 1: Results

- Chi-square analyses did not reveal a significant effect of treatment group on response rate for any of the mailings.

Data Collection Phase	Response Rate by Data Collection Phase		
	No Stamp	Traditional Stamp	Breast Cancer Stamp
Response Rate (Mailing 3)	10.3%	9.8%	9.1%
		<i>p=.6930</i>	
Cumulative RR (Mailings 3-4)	22.8%	22.2%	23.0%
		<i>p=.7285</i>	
Cumulative RR (Mailings 3-5)	25.5%	26.0%	26.3%
		<i>p=.9051</i>	

# Experiment 1: Results, Continued

- Research Question: Do breast cancer stamps have a larger impact for women or for oncologists?
  - Limited the analyses to only those who received stamps (n=1,224).
  - No differences found by gender.
  - Marginally significant difference in response for oncologists.

# Experiment 1: Results, Oncologists

- Limited the analyses to the 74 oncologists who received a stamped envelope on the follow-up mailings.

	<b>Breast Cancer Stamp</b>	<b>American Flag Stamp</b>
Completes	15	9
Response Rate	44.1%	24.3%
	<i>p</i> =.0823	

# Experiment 2: Methods

- 2008 survey was similar to the 2007 survey in approach, design and sample
- It was also a random sample of 3,400 board certified physicians stratified into 4 regions and 17 specialties.
- Included an additional 900 pediatric specialists surveyed in 2008

# Methods: Experiment 2, 2007

Compared two types of postage:

1. Traditional return postage-paid business reply mail,
2. A standard 39-cent first-class return postage stamp of an American flag

## Sample Distribution

<b>Experimental Group</b>	<b>Distribution %</b>
Business reply envelope	49.8%
American flag stamped return envelope	51.2%

# Results: Experiment 2, 2007

- Chi-squared analyses showed stamped return envelopes had a positive effect on response rates for the adult sample, but not for the pediatrics sample .

<b>Data Collection Phase</b>	<i>Data Collection Condition</i>	
	<i>No Stamp</i>	<i>Traditional Stamp</i>
Full Sample, RR	15.4%	19.4%
	<i>p</i> =.0040	
Adult (primary) Sample RR	13.9%	18.5%
	<i>p</i> =.0014	
Pediatrics RR	20.0%	20.9%
	<i>p</i> =.7742	

# Results: Cost Effectiveness

- On the follow-up mailings, stamps were not cost-effective as they increased costs, but did not improve response
- For the initial mailing to the primary sample, stamps were cost effective:
  - BRE group: Returned surveys (184) x the cost of a stamp (42 cents) = \$77.28
  - Stamp group: Full sample (1,321) x the cost of a stamp (42 cents) = \$554.82
  - Difference in cost < \$500

# Summary

- First Experiment:
  - Stamped envelopes did not improve response rates for follow-up mailings, increased costs
  - Breast cancer stamps were slightly more effective with oncologists, but not with physicians overall
- Second Experiment:
  - Stamped envelopes associated with 4.6% increase in response rate for primary sample, increased costs by approximately \$500
  - Stamped envelopes not effective for pediatric sample

# Discussion

- Unclear why stamps less effective in follow-ups
  - Sample members who do not respond to the first mailings may be more reluctant to participate
  - Use of Priority and FedEx may have overshadowed stamped returns
- Unclear why stamps less effective in pediatrics
  - The pediatric specialists had higher response rates than the primary sample, which may have lessened the effect

# Limitations

- The initial survey mailing and the nonresponse follow-up mailings that were examined were not part of the same survey cycle.
- Study may not be generalized to other populations of interest

# Contact

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