

# Incentives in Physician Surveys: An Experiment Using Gift Cards and Checks

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## Abstract

Incentives play an important role in stimulating responsiveness in surveys of health care professionals. Past research has found that a pre-paid monetary incentive is associated with increased participation, faster participation and lower costs of executing the survey when compared to control groups without an incentive being offered (Kellerman & Herold 2001, Berry & Kanouse 1987). In this paper we discuss an experiment with two forms of pre-paid incentives. We split a sample of 2400 physicians into two groups. One group received the experimental treatment of a pre-paid American Express gift card and a control group received checks of equal value (\$25). We describe the differences in overall response rates, and timing of completed survey return. Data are collected using a multi-mode effort including four waves of mail, web-enabled data collection and CATI interviewing beginning in January 2008.

**Key Words:** Physician survey, multi-mode survey, incentive.

## 1. Introduction

Incentives are a common feature in survey research. In surveys of health care professionals, and physicians in particular, the effects of the value and timing of delivery has received some attention. For instance James & Bolstein (2005<sup>1</sup>) found that there were non-significant differences in response rates between physicians who were provided up-front cash versus checks as incentive payments. Doody et al. (2003<sup>2</sup>) however found that cash was more helpful than checks in gaining cooperation among radiological technologists.

The effects of incentive use have been measured by the quality of responses and representativeness of the final data set (Tambor et al. 1993<sup>3</sup>) and the promptness with which physician-respondents complete a survey (Berry and Kanouse 1987<sup>4</sup>).

In addition attention has been paid to the form this payment takes. Olso et al. (1993<sup>5</sup>) explored the efficacy of small charitable donations of behalf of physician-respondents versus no such incentive and found no meaningful benefits. Tomboor et al. (1993<sup>6</sup>) discovered that offering continuing-medical education credits for survey participation was not significantly related to increased survey cooperation, except among family physicians.

Several studies also looked into the effectiveness non-monetary incentives on physician participation. Some items have included pens and pencils (Clark, Khan, & Gupta, 2001<sup>7</sup>; Ward, Bruce, Holt, D'Este, & Sladden, 1998<sup>8</sup>), and brochures (Easton et al., 1997) or donations to a physician's specialty society (Gattellary & Ward, 2001<sup>9</sup>). Generally, when compared to physicians receiving no incentive, token non-monetary incentives have little or no effect on response rates (Bonito et al., 1997<sup>10</sup>; Burt & Woodwell, 2005<sup>11</sup>).

One experiment concerning the effects of currency versus checks found no significant differences in response rates, though this study involved owners of construction companies (James & Bolsetein, 1992<sup>12</sup>). Doody et al., however, found that cash was more persuasive than checks of equal value in gaining survey cooperation among radiological technicians. In this study,

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we compare the survey response rates between physicians who received a personalized incentive check versus a gift card of equal value.

Gift cards are growing in use among the general population as a gift-giving device. Offenber, for example, estimates the money spent to purchase gift cards has increased from \$60 billion to \$80 billion between 2005 and 2007 (13). Gift cards also have found a place as a form of incentive payment in survey research (Kay et al. 2001.14). However, the utility of this form of payment as an inducement for physician-respondents has been neglected.

## 2. Background and Method

This study was part of an evaluation of a purchasing program for physicians. Currently we cannot disclose the client or detailed project description.

A sample of 2400 physicians in all 50 United States and all medical specialties was drawn using the UPIN registry. This group included equal number of program participants and non-participants. To test whether there is a significant difference in response rates between respondents were split into two groups. One group received gift cards and the other received personalized checks. Both incentives were prepaid.

Data collection began in January 2008 and is continuing. The data collection schedule for this study included 5 waves and was modeled on the Dillman tailored-design method (Dillman, 2000<sup>15</sup>). Data collection involves a five-wave mailing. Mailing included an advance notice, followed by a mailing which included a personalized cover letter on official letterhead and signed by the project officer, a letter from the RTI project director explaining the survey, the survey an incentive, and a reply envelope. This was followed up with a reminder postcard, and two follow up mailings of the survey. We also called non-respondents to prompt them to cooperate just prior to the final mailing.

The survey paper and pencil instrument (PAPI). The non-participants survey is 6 pages long and the participants' survey is 10-pages. The time to complete the surveys (including review of cover materials) ranged between 8 and 15-minutes. Each survey mailed has a unique tracking number for each respondent. Response items are mostly Likert scales and subjects include satisfaction with billing procedures, how program is used, why physicians/practice elected to use (or not use) program, and basic demographics. At the time of analysis, the overall response rate was 38% (n=912).

One of the key components of the design is the mixed-mode methodology. Previous literature has shown that some physicians prefer to participate in surveys via mail. However, a significant number of physicians will respond only via Web (Olson et al. 2000<sup>16</sup>, Shosteck and Fairweather, 1979<sup>17</sup>). Thus, both mail and web forms of response were offered. To maximize the opportunities for response, physicians were also given the option to fax back paper surveys to a toll-free line, or call-in to complete the survey via a toll-free telephone line.

For the purposes of the current study, a subset of mailings was delivered with randomly assigned incentive types<sup>3</sup>. This subset of respondents were selected out of the initial 2400

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<sup>3</sup> Initially when developing the strategy for this analysis, we randomly assigned the entire sample (participating and non-participating) into incentive groups. Due to a glitch in the mailing process and a delay in receipt of incentives, most participating respondents received a gift card, while most non-participating respondents received a check. A subset of each group at the end of each distribution list did receive the opposite type of incentive. These groups were organized alphabetically. While alphabetical organization is not a purely random draw, we would suggest that there is no bias on any relevant variable differentiating those at the end of the alphabet from those at the beginning of the alphabet. In addition to this group, a subsample of the larger group (participating physicians who received gift cards and non-physicians who received checks) was drawn randomly to create more (size) equivalent groups.

member sample and maintains the random integrity of the sample to remove the confound of survey-type (participating or non-participating). As discussed below, a logistic regression analysis was also performed to isolate the variables of survey-type and incentive-type.

We also removed any cases that were ineligible or that we discovered to have incorrect location information. In a small percentage (fewer than 10%) of cases, we received back mailings as undeliverable. These cases were removed so that they did not appear in the analysis as non-response (incomplete) cases. It is possible that some additional cases are un-locatables as well, but are correct to the best of our knowledge. A total of 103 cases remained as the final sample for analysis.

### 3. Results

Descriptive data is provided in tables below. The overall response rate at the time of analysis was 38%. Table 1 demonstrates that in this sample, 50% of respondents who received a check responded to the survey while 17% of respondents who received a gift card responded to the survey.

In addition, we examined a breakdown of response rate by group participation. Table 2 demonstrates that in this sample, 39% of the non-participating group responded to the survey while 37% of the participating group responded to the survey.

We conducted a forward selection logistic regression analysis, including the variables of incentive type (binary variable classified as gift card=0 and check=1) and group participation (Non-Participation=0 and Participation=1). Using this method, the model retained only incentive type as a significant predictor of response at the  $p=.05$  level. The Wald's  $\chi^2$  statistic for incentive type=5.0915,  $p=.0224$ . The Odds Ratio estimate for this incentive type = 2.562, indicating that those who received a check were about 2.6 times more likely to respond to the survey.

**Table 1: Response Rate by Incentive Type**

	Non-Response	Response	
Gift Card	41 (71%)	16 (16%)	57
Check	23 (50%)	23 (50%)	46
			N=103

**Table 2: Response Rate by Group Participation**

	Non-Response	Response	
Non-Participating	28 (61%)	18 (39%)	46
Participating	36 (63%)	21(37%)	57
			N=103

In addition to the incentive type and group-participation, we examined a few additional variables. Due to the size of the sample, we did not want to saturate the model with predictor variables. We considered using medical specialization as a predictor variable. In this sample, there was a variety of specializations too great to create simple groups. We also considered gender. The majority (75%) of the sample analyzed were males. We examined the simple relationship between gender and response, and found that males were more likely to respond, however there was no significant difference in the response rates of males and females.

#### 4. Conclusions

The current findings provide a good starting point in understanding the relationship between incentive types and response rates for physicians. While the use of gift cards as an incentive may be more effective for some populations than others, this study suggests that checks are more effective incentives for physician samples than cash-equivalent gift cards in a mail survey design.

Nowadays, physicians are inundated with requests for research participation. A \$25 gift of any type is unlikely to sway a physician to participate in itself. Many physicians are approached with incentives worth hundreds of dollars in cash or gifts to participate in for-profit market research. Physicians may react differently to incentives worth \$200 or more, however, at the \$25 level, the monetary value of the incentive itself may not be a strong influence on physicians' willingness to participate. The strength of a gift card as an incentive is that it enhances the monetary value of the gift by being immediately available. Unlike a check incentive, the gift card can be immediately redeemed for money. For physicians this may not be of much importance for an amount of only \$25. Instead, other factors may persuade physicians to participate, such as the importance of the research or reputation of the agency conducting the study (Olson et al., 1993<sup>18</sup>). When these factors are considered, it is not surprising that physicians may respond more positively to a check incentive. Physicians may perceive a gift card to be somewhat "commercial" looking. Instead, a check bearing a non-profit national agency's name, as in this study, may evoke more "legitimate" perceptions of important research being conducted.

The study is a good starting point, but cannot provide the whole picture on physician response. Due to the size of the sample, there are power limitations and it's possible that a larger sample might have provided stronger and more complex results. While the current overall project

response rate has improved (above 50%) from the time the data were collected for analysis, the participating group continues to lag (at a wider gap) behind the non-participating group. It is possible that the incentive type did have a strong impact on response rate at the onset of the study and initial mailings, however as the study goes on there are additional reasons for non-response. Anecdotally, we have learned that many physicians and practices in the participating group feel they know little about the program, which is a likely reason for this lag in response rate. Because the program is fairly new and most practices may use it only for a few drugs, a number of physicians and practices have indicated that they do not feel they have enough information to complete the study.

In addition, other variables unavailable or unusable at the time of analysis, such as teleprompting outcomes, and specifics to the physicians (specialization, number of years in practice, practice size) may affect response rates. As is the precedent in much non-response literature, response rate in the current study is most likely a function of many factors, although the evidence here is a key piece of the puzzle.

While the evidence here suggests that gift cards are less effective with physicians, we would still suggest that gift cards may be more persuasive for other types of populations. As described previously, physicians are a unique population and often have very different motivations for completing survey research. A cash equivalent is likely to be more effective on a mixed income population, and populations that are not inundated with research requests. The cost of using various incentive types should always be considered. In this study, gift card use was significantly more expensive. In small samples, or where budget is less of an issue and high response rate is imperative, a gift card incentive may be successful in some populations. Because of the additional cost for use, it may also be considered as a “second” or “final” resort.

Future research should reach deeper to understand sample members’ reactions to and opinions of the various incentive types. Without this deeper cognitive information, it’s difficult to say with confidence why a gift card incentive may be less persuasive than a check incentive. This understanding may help researchers understand when a using gift card incentive is a good idea, and when it is not.

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