

THE USE OF A PREPAID INCENTIVE TO CONVERT NONRESPONDERS
ON A SURVEY OF PHYSICIANS

Marc L. Berk, Project HOPE, W. Sherman Edwards, Nancy Gay, Westat, Inc.
Marc L. Berk, Two Wisconsin Circle, #500, Chevy Chase, MD 20815

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Abstract

Obtaining high response rates on physician surveys provides a difficult challenge to health services researchers. Recent studies have indicated that the use of a prepaid incentive can dramatically increase response rates. The National Survey of Diagnostic Allergy Testing included a controlled experiment in which one group of respondents received a prepaid monetary incentive while a second group did not receive an incentive. Persons assigned to a third group received a prepaid incentive only if they did not respond to the first mailing.

The study examined whether or not the decision to provide a monetary incentive can be postponed until the results of the initial mailing are available. This would enable researchers to restrict the use of monetary incentives to surveys where early results indicate response rates may be inadequate. The findings confirmed earlier studies which indicated that the use of a prepaid incentive leads to a large increase in response rate. The study indicated, however, that the value of a prepaid incentive is greatly diminished if the incentive is postponed until the second mailing. The study also indicated the great majority of nonresponders do not cash the incentive checks. The prepaid incentive is, therefore, an effective and relatively inexpensive way of reducing survey nonresponse.

Background

The use of monetary incentives is a well established procedure for increasing survey response rates. Comparisons of

surveys that use prepaid incentives with those that use promised incentives (Armstrong, 1975; Schere and Cournoyer, 1976) suggest that the prepaid incentive is more effective than one contingent upon the respondent completing the questionnaire. Until recently, however, there have been few controlled experiments to examine the relative merits of prepaid and promised incentives. Peck and Dresch (1981) found that a prepaid monetary incentive of \$3.00 yielded a response rate of 76 percent compared to 68 percent response rate for a group to whom a payment was promised, and 54 percent for the group to whom no payment was offered. This study was based on a population that had participated in an earlier study as part of the American College Testing Program. Results from the pilot test of the 1987 National Medical Expenditure Survey (NMES) (Berk et al., 1987) also indicated that the use of a prepaid monetary incentive has a beneficial impact on survey response rates. The findings of Berry and Kanouse (1987) similarly support the use of the prepaid monetary incentive. In the Berry and Kanouse study, one group of physicians was sent a prepaid incentive of \$25 while a second group was promised the \$25 incentive upon survey completion. A 78 percent response rate was obtained for the group given a prepaid incentive compared to a response rate of 66 percent for those to whom incentive payment was contingent upon returning the questionnaire.

The findings of Berry and Kanouse have generated

considerable attention because of the difficulty of obtaining adequate response rates in surveys of physicians. Years ago the American Medical Association (AMA) warned that "Physicians are becoming weary and wary of surveys." These feelings, in turn, are reflected in low response rates which can seriously impair the validity of survey results (Martin, 1974).

Although evaluation of physician surveys has generally indicated that nonrespondents and respondents are similar on most important characteristics (Goodman and Jensen, 1981; Berk and Meyers, 1980; and Kasper, 1979), minor differences on one or more variables are usually found (Goodman and Jensen, 1981; Berk and Meyers, 1980; Kasper, 1979; Loft, 1980; Harkins, 1981; and Berk, 1984). A particularly important feature of the Berry and Kanouse study was an analysis of the cost effectiveness of using prepaid incentives. They found that since the use of a prepaid incentive decreases the need for callbacks, much of the cost of the incentive is mitigated. As a result of these findings, the Federal government has incorporated prepaid monetary incentives on two recent physician surveys: the pretest of the Patient Identified Physician Survey (PIPS) component of the 1987 NMES and the 1988 National Survey of Physicians (NSP) sponsored by the Physician Payment Review Commission.

The current study provides further examination of the usefulness of a prepaid monetary incentive in a survey of physicians. In this study, we explore the possibility that the decision to use a prepaid monetary incentive can be delayed until results of the initial mailing become known. This would enable researchers to restrict the use of monetary incentives to surveys where earlier results indicate the response rates may be inadequate.

Study Design

In 1988, Project HOPE and its subcontractor Westat, Inc., conducted the National Survey of Diagnostic Allergy Testing for the Health Industry Manufacturers Association. The purpose of this study was to determine the cost-effectiveness of two alternative methods of diagnosing allergies. The monetary incentive experiment was conducted on a subset of physicians selected for the study. The survey was conducted by mail. Allergists and otolaryngologists believed to be conducting allergy testing were mailed a two-page questionnaire. The questionnaire solicited information about the kinds of tests performed and the charges for specific types of services. Questionnaires were sent by certified mail. Approximately three weeks after the first mailing, a second mailing was sent to all nonresponding physicians. A sample of 328 physicians was divided into three experimental groups. The first group received a \$10 incentive with the first mailing. If they did not respond to the initial mailing, they were sent a new questionnaire as well as a letter urging them to respond and mentioning the \$10 incentive they had received earlier. The second group of physicians did not receive a monetary incentive with the initial mailing. On the second mailing of the questionnaire, however, they received another letter explaining the importance of the study as well as a \$10 prepaid monetary incentive. No mention of payment was made to the third group on either the first or second mailing.

We note that for purposes of equity all responding physicians were eventually paid \$10. This includes all responders in the "no mention of payment" group as well as those physicians who responded to the initial mailing

even though they were not scheduled to receive a prepaid incentive until the second mailing.

Findings

The results indicate the use of a prepaid incentive has a dramatic impact on the response to the initial mailing. Fifty-five percent of those physicians who received a prepaid incentive responded to the initial mailing, while less than 20 percent of those for whom no mention of payment was made on the initial mailing responded (Table 1). The use of a prepaid incentive on the second mailing did have some minor beneficial effect on survey response. Thirty-five percent of those receiving the prepaid incentive on the second mailing responded to the prompt, compared with 18 percent of those who received the incentive on the initial mailing and required a prompt. Twenty-nine percent of those who did not receive payment on either mailing responded to the second mailing. The difference in response rates to the prompt between Group 2 (incentive with prompt) and Group 3 (no incentive) is not statistically significant ($Z = 0.75$).

Although some beneficial impact was found, it was clear that delaying the incentive until the second round of mailing did not have the same effect as including an incentive with the initial mailing. Overall, a 63 percent response rate was obtained for Group 1 physicians (prepaid incentive with the initial mailing), as compared with only a 50 percent response rate for Group 2 (prepaid incentive on the prompt) and a 40 percent rate for Group 3 (no incentive). The difference between Group 1 and Group 2 overall was significant at the .05 level ($Z = 2.17$); the difference between Group 1 and Group 3 was significant at the .01 level ($Z = 3.05$), and the difference between Group 2 and Group 3 was not significant ($Z =$

1.26).

We also examined the net cost of the prepaid incentive. Consistent with the results of Berry and Kanouse, we found that the cost of a prepaid incentive is mitigated by the fact that nonresponding physicians seldom cashed the check. We found that 93 percent of Group 1 physicians responding to the first mailing cashed the check (Table 2). Similarly, 91 percent of Group 2 physicians who responded to the prompt mailing cashed their check, compared with only 13 percent of nonresponders who received the incentive on the second mailing. Coincidentally, a total of 113 completed questionnaires were returned, and 113 checks were cashed. Critics of prepaid incentives note the wastefulness of paying persons who subsequently choose not to respond to the survey. Our evidence shows that this occurs only rarely; the vast majority of nonresponders choose not to cash their incentive checks.

Conclusion

Many government agencies are averse to offering monetary incentives, particularly prepaid incentives, and some researchers (Sheatsley and Loft, 1981) have questioned the use of incentives for research in the public interest. Clearly, the use of prepaid incentives should be restricted to those cases in which its use is considered necessary to obtaining adequate response rates. Delaying the decision to use an incentive until the second wave of mailing enables the researcher to make a decision as to whether or not an adequate response rate is likely to be obtained in the absence of payment. Unfortunately, our data indicate that the incentive is not nearly as effective when used in a follow-up mailing. In view of the difficulty of obtaining high response rates on physician surveys, it is unlikely that a researcher will be able to conclude at study

onset whether a high response rate can be obtained. The use of a prepaid monetary incentive enclosed with the questionnaire, therefore, appears to be an effective and cost effective method for improving response rates on physician surveys.

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Table 1. Effect of Incentive Treatment on Survey Response Rates in Percent^{1,2}

	Response Rate for Initial Mailing	Response For Prompt ³	Combined Response Rate
Group 1:			
Prepaid Incentive on Initial Mailing	55% (125)	18% (56)	63% (125)
Group 2: No Mention of Payment on Initial Mailing; Incentive with Second Mailing	22% (125)	35% (97)	50% (125)
Group 3 No Mention of Payment on Either Mailing	15% (65)	29% (55)	40% (65)

¹ "Response rate" for a mailing equals the number of questionnaires returned partially or fully completed divided by the number of mailed questionnaires believed to reach sample physicians (the numbers in parentheses). Excluded from the denominators are packages returned undeliverable (17 out of 334 mailed) and questionnaires returned indicating that the physician was deceased (1) or on sabbatical (1).

² Numbers in parentheses are cell sizes.

³ Refers to the percent contacted in the second mailing who responded. Since responders for first mailing are not included, the total response rate is not equal to sum of first two columns.

Table 2. Probability of Cashing Incentives Check by Incentive Treatment Model and Response Rate. Percent Cashing Check

	Responded to Initial Mailing	Responded to Prompt	Nonresponders	Total
Prepaid Incentive Initial Mailing	94% (69) ¹	40% (10)	11% (46)	59% (125)
Prepaid Incentive 2nd Mailing (prompt)	N/A	91% (34)	13% (63)	40% (97)

¹Numbers in parentheses are cell size.