

NONMONETARY INCENTIVES: CAN THEIR EFFECTS BE REPLICATED?

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Abstract: Response rates are an increasing concern in surveys. While many surveys offer a monetary incentive to minimize nonresponse, nonmonetary incentives are attractive alternatives for surveys that are unable to offer money. Willimack and others (1995) report encouraging results from an experimental study using a gift pen in a face-to-face survey: Response rates were almost 5 percent higher on the Detroit Area Study for households that were mailed a ballpoint pen with an introductory letter, compared to households that were mailed the introductory letter only – 80.6 percent versus 75.7 percent. The Medicare Current Beneficiary Survey (MCBS) is a national longitudinal study of the Medicare population conducted for the Health Care Financing Administration. The project staff sought to replicate the experience of Willimack et al. in a national experimental design for a 1996 MCBS panel of 6,000. Gift pens and advance letters were mailed to half of the new sample; the other half received advance letters alone. Response rates were examined for the treatment and control groups by region, metropolitan status, respondent age, and interviewer experience. On the national study overall, no positive response rate effects were associated with the pens. Possible explanations for the pen's lack of efficacy, including study salience and high baseline response rates, are discussed.

Background

A number of survey organizations have reported declining survey response rates during the past decade for both telephone and in-person surveys (Bradburn 1992). Research on methods for increasing response rates can help researchers address this critical problem. There is an extensive literature, summarized by Groves and Couper (1998) that shows cash incentives have a positive effect on response rates. Schwarz *et al.* (1995) suggest that advance letters and payments to respondents are among the more effective methods used to increase response rates. Research on nonmonetary incentives, (i.e., gifts, in-kind payments, etc.) also show a positive effect (Hansen, 1980; Nederhof 1983). However, most of the studies on incentives have been based on mail surveys. Little research has been published about the use of nonmonetary incentives on in-person surveys. Singer

et al. (1997) studied the effects of various incentive treatments on an in-person survey of college students; however, no control group was used to compare the effects of incentives and no incentives on overall response.

In 1995 Willimack, Schuman, Pennell, and Lepkowski reported on an experiment using non-monetary incentives on the Detroit Area Survey. In the experiment, half the sampled households were mailed gift pens to test the effects on response rates of a prepaid nonmonetary incentive. The response rate for the "no pen" group was about 76 percent; for the "pen" group it was about 5 percent higher. Most of the response rate difference was due to fewer refusals in the pen group. Willimack *et al.* reported a 12.4 percent refusal rate in the pen group, versus 16.1 percent in the no pen group. They also reported a surprising increase in Postal Service returns indicating "no such street address" and other non-sample dispositions in the pen group; they speculated that greater Postal Service intervention might be due to the perception that the package contained something of value. If these results could be replicated on a national study, survey organizations might have a cost-effective tool for countering response rate declines.

The Medicare Current Beneficiary Survey (MCBS) has been conducted continuously for the Health Care Financing Administration (HCFA) since 1991. It is "the only comprehensive source of information on the health, health care, and socioeconomic and demographic characteristics of aged, disabled, and institutionalized Medicare beneficiaries" (Laschober and Olin, 1996). The MCBS is a multi-purpose survey of a nationally representative sample of the Medicare population. Beneficiaries are interviewed three times a year for four years. The study adopted a rotating panel design in 1995. Each fall round about 4,000 beneficiaries exit the study and a new sample of about 6,000 enter. The MCBS does not offer respondents any incentives, except for a nominal \$3 provided for the use of the respondents' electricity as interviewers plug their laptop computers into AC outlets in respondents' homes (Adler, 1994).

In 1995, when the Willimack *et al.* article appeared, concerns were emerging about response rates on the MCBS. The first round of the 1991 panel achieved a response rate of over 87 percent (see Table 1). However, between 1992 and 1994 the response rate in the initial round for the supplemental panels introduced in the next 3 years averaged only 83 percent. The response rates in the second and third

Table 1. MCBS Response Rates: 1991-1997

Time in Sample	Panel						
	1991	1992	1993	1994	1995	1996	1997
1. Initial Response Rate	87.2%	84.3%	82.8%	82.8%	83.1%	83.4%	83.6%
2. Conditional Response Rate	93.6%	95.1%	95.4%	94.6%	94.0%	95.0%	
3. Conditional Response Rate	95.7%	96.0%	97.5%	97.0%	98.0%	97.6%	
Cumulative Response Rate, First 3 Rounds	78.1%	77.0%	77.0%	76.0%	76.6%	77.3%	

rows of Table 1 are "conditional" rates, defined as the number of completed interviews in the round divided by the number of completed interviews in the previous round. Although the 1992-1994 panels achieved somewhat higher conditional rates in their second and third interview rounds than the 1991 panel, the cumulative response rate over the first three rounds declined, from 78.1 percent in 1991, to 77.0 percent in 1992 and 1993, to 76.0 percent in 1994.

This trend was disturbing and project staff, in consultation with HCFA, embarked on a program for improving response rates. It included: (1) analysis of nonresponse components, and interviewer response rates with *new* sample. (Some interviewers did better working the new sample than others); (2) focus groups with interviewers and supervisors; (3) extensive retraining on gaining cooperation; (4) enhanced locating activities, including Internet, credit reporting bureau, and Social Security searches, greater focus on postal service change of address requests, and quicker use of the HCFA Master Enrollment File; and (5) an experiment with nonmonetary incentives to replicate Michigan's Detroit Area Study experience with a new sample in 1996.

Study Design

The 1996 panel introduced a new sample of about 6,000 Medicare beneficiaries, allocated across 100 Primary Sampling Units. Figure 1 illustrates the design for the MCBS pen experiment. Half of the new sample members were assigned to receive pens with an advance letter and brochure, and half received the same information with no incentive. Both "pen" and "no pen" cases were assigned to each of the more than 200 interviewers who worked on the project. Both interviewers and supervisors were blind to the case's treatment. A split-half design was again used in the next round, that is, half of the respondents who did not get a pen in Round 16 got one in Round 17. The remaining quarter of the original population received no pen in either round.

Figure 1. The Study Design: Treatment by Round

TREATMENT	ROUND	
	16	17
Pen	Pen	No Pen
No Pen	No Pen	Pen
		No Pen

Results

As Table 2 indicates, the results of the experiment were disappointing. In the analyses that follow, the significance of the differences in response rates was assessed by testing the hypothesis of equal response rates at the 95 percent confidence level. In Round 16, no significant difference was found. The pen group produced a response rate of 82.7 percent compared to 82.5 percent in the no pen group. Similarly, in Round 17, the pen group response rate was not significantly higher than the no pen cohort.

Table 2. Response Rates by Condition and Round

Round	Condition	N	Response Rate
16	No Pen	2994	82.5
	Pen	2985	82.7
	Total	5979	82.6
17	No Pen	1200	94.4
	R16 Pen	2407	93.3
	R17 Pen	1204	93.4
	Total	4811	93.6

No statistically significant differences

Analysis

Differences between the Willimack study and the MCBS study were examined to explain these findings. The Willimack study's effect was confined entirely to their suburban Detroit sample; inner city Detroit showed no effect of the pen use. To determine if geography played a role in the MCBS results, response rates were analyzed by the project's 11 supervisory regions. There was a considerable amount of variation in pen effect (and direction of effect) by region, but none of these effects were significant, in part because the number of nonresponse cases in each region were relatively few. Further, metropolitan status (non-MSA versus MSA PSUs) was examined, but again no effects were found for either round.

The Detroit Area Study is a random sample of households. The pen was mailed to the household with advance letter materials before the household informant was selected. In contrast, the MCBS sample is drawn from a list of Medicare beneficiaries, so it is primarily an older sample. Perhaps the older people in MCBS are less influenced by gift pens. But an examination of response rates for the 800 MCBS respondents aged 21-64 showed no effect.

Willimack *et al.* reported that their positive effect was entirely associated with the first contact. With the MCBS data, the authors were unable to examine the effect on first contact directly, but data was available on whether the case was ever a refusal. The pen did not result in a higher proportion of MCBS cases being completed before becoming refusals, and had no effect on the conversion rate for the refusals.

The Detroit Area Study used students (who presumably had no prior interviewing experience) for the initial contacts, while the MCBS is staffed by both new and experienced interviewers. The response rates obtained by new MCBS interviewers were examined. No positive effect of the pens was found. In fact, the direction was the opposite of what was expected. New interviewers completed 84.6 percent of the cases with no pens, but only 80.2 percent of the cases with pens. This result may have been confounded by a variation in the pen packaging. New interviewers' pen packages were sent in white business reply envelopes. Experienced interviewers' pen packages were mailed in stapled brown bulk envelopes. It is possible that, because of these treatment package variations, any effect that might have been observed in response rates for new interviewers was overwhelmed by the package difference.

On a related note, the pens used by the two studies were not identical. Perhaps the most notable difference was the text printed on the pen. In the Detroit Area Study, the pens read "The University of Michigan." In the MCBS, the pens carried the name of the project. A

University of Michigan pen might have been a more impressive gift in the Detroit suburbs than a "Medicare Current Beneficiary Survey" pen for the national Medicare population.

Another difference between conditions on the two studies lies in their initial base response rates. The Detroit Area Study was successful at boosting a 76 percent response rate to 81 percent with gift pens, whereas the MCBS sought to use pens to increase an 83 percent response rate. Nonmonetary incentives may become less effective at higher response rates.

Despite the disappointing effects of gift pens in the 1996 MCBS panel, the project has achieved some successes in other areas. The enhanced training, locating efforts, and case assignment based on interviewer strengths mentioned above, appear to have improved response rates. (See Table 1.) Both the initial response rate and the cumulative rate after three rounds have improved each year since 1994.

Conclusion

No positive effects of the MCBS gift pen were seen. Mailing the pen with advance letter documents did not improve response rates within interviewer geographic region, metro status, age, conversion status, and interviewer experience categories. The packaging and the perceived value may explain the results in part: The package may not have been perceived to contain much of value, or there might have been an effect for new interviewers if the package had been more imposing. However, the authors suspect the biggest differences between the MCBS experiment and the Michigan study may have been in the sample design and the base response rates. Since the Michigan study used an area probability frame, the project staff did not know at the outset who the selected respondent in the household would be when the advance package was mailed. In contrast, the MCBS study used a list frame, and could address prospective respondents by name. In addition, the MCBS is a study about the Medicare program, directed at individual participants in the program. Many Medicare beneficiaries may find the study has high saliency. The Detroit Area Study does not have such a sharp focus, and is probably less salient to most respondents. This lack of interest in the topic may be a factor in explaining the difference between the Detroit Area Study's 78 percent response rate for its control group, compared to the MCBS's 83 percent. Thus, the pen may have overcome an obstacle to participation in the Detroit Area Study that was simply not present on the MCBS.

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