Disability Data Brief

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Not Much Bang for the Buck: Implementing a Pre-Paid Incentive on a National Survey of Disability Beneficiaries

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Round 8 of the Social Security Administration's National Beneficiary Survey, administered in 2023, included a random assignment experiment to test the effect of offering a prepaid incentive of $2 to sample members in the initial outreach letter. The findings suggest that overall, the $2 prepaid incentive increased the survey completion rate by 1.6 percentage points (p = 0.02). The increase in the completion rate was concentrated among males (a statistically significant 3 percentage-point increase). We found no significant differences in the impact of the incentive by age, disability program, or impairment. Given the cost to implement the incentive, the relatively small increase in completion rates, and the potential for only modest cost reductions in the data collection effort, the findings suggest that implementing a prepaid incentive is not cost-effective for the National Beneficiary Survey.

Introduction

Round 8 of the National Beneficiary Survey (NBS) included an experiment to examine whether including a $2 cash pre-payment in the initial outreach letter increased survey response. Behavioral science literature suggests the norm of reciprocity creates a feeling to repay in kind. In this context, giving potential survey respondents $2 should increase their desire to reciprocate by completing the survey (Falk 2007; Gneezy and List 2006; Cialdini 2007) and might encourage them to cooperate with the interviewer when contacted. Moreover, the survey literature shows prepaid incentives are more effective than postpaid ones, and the combination of prepaid and postpaid is more effective than just prepaid (Singer and Ye 2013; Mercer et al. 2015).

About the NBS

The NBS, conducted for the Social Security Administration, collects data on a nationally representative sample of Social Security Disability Insurance (SSDI) beneficiaries and adults receiving Supplemental Security Income (SSI) because of a disability. Findings from this large-scale survey help policymakers better understand beneficiaries' characteristics and experiences with Social Security disability programs. Mathematica has conducted the NBS since its inception in 2004.

In conducting this experiment, we sought to answer the following questions:

- Does a prepaid incentive, in combination with a postpaid incentive at survey completion, increase the completion rate?
- Does a prepaid incentive reduce data fielding time for a national survey of disability beneficiaries?
- Does a prepaid incentive increase the likelihood that sample cases call in to complete an interview before outbound dialing begins, thereby reducing the level of effort required to contact and complete survey cases?
- Does a prepaid incentive increase completion rates for specific subgroups with historically lower response rates on the NBS, including younger age groups and SSI-only recipients?

Methods

We randomly assigned all sample cases released in the first NBS sample wave into one of two groups: treatment and control. The treatment group received $2 attached to the advance letter and a $30 gift card upon completing the survey. The control group received only a $30 gift card upon survey completion. In total, we randomly assigned 13,307 cases with 4,994 in the treatment group and 8,313 in the control group.

The analyses include the following three components:

1. Verifying the comparability of the treatment and control groups
2. Estimating the impacts of the prepaid incentive on the completion rate, fielding time, and call-ins before the first outbound call
3. Estimating the impact of the prepaid incentive on the completion rates of specific subgroups

Findings

Comparability of the treatment and control groups

We produced descriptive statistics of sample members' characteristics and conducted statistical tests to assess if there were significant differences between treatment and control group members and verify the integrity of the random assignment process. The findings indicate the treatment and control groups were similar in terms of age, sex, and impairment. The two groups differed somewhat in terms of program; treatment group members were somewhat less likely to be concurrent beneficiaries (receiving SSI and SSDI) and more likely to be SSI-only recipients than control group members, but the differences were small (about 1 to 2 percentage points). We controlled for differences between the groups in our analysis by estimating regression-adjusted impacts.

Impact of the prepaid incentive on survey completion, fielding time, and call-ins

To assess whether the prepaid incentive increased survey completion, we compared the completion rates for the treatment group to those of the control group. We focused on the 60-day completion rate as the key outcome for the experiment because completions that occurred after two months were likely a result of other factors and not due to the prepaid incentive. We also compared the treatment and control group means and distributions of the following:

- Calendar days between the advance letter mailing date and completion date for the initial 60-day fielding period

- Call-ins that occurred before outbound calling began (the start of outbound dialing typically begins one to two weeks after the advance letter mailing date)

Table 1 presents the unadjusted completion and call-in rates and time to completion. The findings suggest the prepaid incentive increased the 60-day completion rate, changed the distribution of days to completion (more interviews were completed in the first 15 days), and increased the likelihood that sample members called in to complete an interview before the first outbound call. The incentive had no impact on mean days to completion overall or among call-ins.

Table 1. Unadjusted completion and call-in rates and time to completion among treatment and control group members (percentages unless noted otherwise)

Outcome	Treatment group		Control group		*p*-value of difference
	Number	Mean	Number	Mean	
60-day completion rate	858	17.18	1,303	15.67	0.024
Days to completion among those completing in 60 days					0.046
0–15	224	26.11	279	21.41	
16–30	317	36.95	539	41.37	
31–45	176	20.51	282	21.64	
45–60	141	16.43	203	15.58	
Mean days to completion	858	26.76	1,303	27.48	0.301
Called in and completed interview before first outbound call	220	4.41	290	3.49	0.010
Mean days to completion among call-ins	220	12.03	290	12.93	0.169

Note: *p*-values are for two-sided t-tests (binary variables) and chi-squared tests (categorical variables) measuring the statistical significance of the difference between treatment and control group members.

We estimated regression-adjusted impacts of the incentive on these outcomes (Table 2). The findings indicate the prepaid incentive increased the 60-day completion rate by 1.6 percentage points (or about 10 percent over the control group mean) and increased the likelihood of call-ins by about 1 percentage point (or 27 percent). The incentive had no impact on the mean days to completion.

Table 2. Regression-adjusted impacts on the 60-day completion rate, days to completion, and call-in rate

Outcome	Control group mean	Impact estimate	*p*-value of impact estimate
60-day completion rate (%)	15.67	1.61	0.014
Days to completion (60-day window)	27.48	-0.80	0.249
Called in and completed interview before first outbound call (%)	3.49	0.95	0.006

Impact of the prepaid incentive on subgroup completion rates

To assess whether the prepaid incentive increased the 60-day completion rates of key subgroups, we compared the unadjusted treatment and control group rates by specific characteristics, including age, sex, impairment type, and program. The unadjusted estimates suggest the prepaid incentive significantly increased completion rates among males, people with mental health impairments, and SSDI-only beneficiaries.

Results of the regression-adjusted estimates suggest that, other characteristics held constant, the prepaid incentive increased completion rates among males by 3 percentage points (or 23 percent) (Table 3). The incentive also had significant positive impacts on the completion rates of people with mental health impairments and SSDI-only beneficiaries (about 2 percentage points each), but the impacts did not differ significantly from the impacts among other impairment or program subgroups. The lack of significance across subgroups might in part be due to the small samples sizes of some of the subgroups, resulting in limited statistical power.

Table 3. Regression-adjusted 60-day completion rates, by subgroup

Characteristic	Control group mean (percentages)	Impact estimate (percentage points)	*p*-value of impact estimate	*p*-value of subgroup differences
Age				0.965
18–29	11.34	1.27	0.360	
30–39	13.00	1.83	0.169	
40–49	14.47	2.07	0.117	
50 and over	22.34	1.30	0.286	
Sex				0.022
Male	13.25	3.01	0.001	
Female	18.36	0.02	0.982	
Impairment				0.857
Mental health	14.05	2.07	0.054	
Cognitive or intellectual	11.44	1.18	0.433	
Other impairment	18.78	1.40	0.153	
Program				0.506
SSDI-only	18.92	2.28	0.026	
SSI-only	11.79	0.70	0.492	
Concurrent	16.87	2.18	0.163	

Discussion

Using a prepaid incentive increased the completion rate at 60 days and this finding is statistically significant. However, the effect is relatively small: the 1.6 percentage point increase represents a 10 percent increase in the completion rate, or 80 additional completed cases. After sending the $2 prepaid incentive to 4,994 cases (at a total cost of $9,988) the cost of the prepaid incentive for the 80 additional completed cases was $125 per case. Spread over *all* 858 completed cases as of 60 days after launch, the prepaid incentive added an additional $12 per completed interview.

We found no impact on the time to complete with a prepaid incentive, so we do not expect any cost savings associated with faster completes (such as reduced time spent locating or dialing cases). However, we found the prepaid incentive led to a 1 percentage-point increase in call-ins before any outbound call attempts. Though the impact is small, these cases represent a real cost savings because they do not require any labor or other costs associated with outbound call attempts, locating searches, or in-person follow-up. It is difficult to precisely estimate the cost savings, but we can estimate how much these cases would have to save to offset the prepaid incentive expense. The 1 percentage-point impact of the prepaid incentive represents 47 call-in completes before outbound dialing. To fully offset the prepaid incentive cost, these 47 cases would have to save $9,988 in data collection costs, or about $213 each. This represents about 4.5 hours of survey operations work per case. We think it unlikely that each of these cases would require an additional 4.5 hours of labor time to complete because cases that call in due to the prepaid incentive are more likely to be individuals who would complete the NBS with a relatively small outreach effort, regardless of the prepaid incentive.

In prior rounds of the NBS, completion and response rates were lower for some subgroups. For the Round 7 NBS, response rates were lower for sample members ages 18 to 49 compared with those ages 50 and older and for males relative to females (Callahan et al. 2021, Tables VI.2 and VI.6). We consistently found similar patterns for these subgroups in earlier data collection rounds. The findings of the experiment suggest a prepaid incentive does not differentially affect completion rates for different age groups but does have a differential impact by sex. The prepaid incentive increased the completion rate among males by 3 percentage points and had no impact on the completion rate among females. Thus, a prepaid incentive could help close the male-to-female response rate gap we have historically observed in the NBS.

Given the costs to implement, the relatively small increase in completion rates, and the potential for only modest cost reductions in data collection work, we do not believe that implementing a prepaid incentive is cost-effective for the NBS. For future studies of SSI and SSDI beneficiaries, a prepaid incentive might be useful, especially if response rates from males are a potential concern or if a small percentage-point increase in the completion rate is critical. Differential incentives— particularly when a prepaid incentive is intended for certain subgroups with historically lower response rates—might be more cost-effective but could be more challenging to secure Office of Management and Budget approval. The evidence from this experiment might be useful in supporting arguments for the use of differential incentives in future data collection efforts.

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