

Prepays, Promises, and Postpays: Additional Evidence on What Helps Response Rates

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Abstract

Whether it is privacy concerns, protection of free time, wariness of telephone solicitation, use of cellular and internet telecommunication, increased prevalence of telephone technologies (such as caller ID and privacy managers), or some combination of these and other factors, it is increasingly difficult to contact people in their homes and to gain their cooperation for telephone interviews. As a result response rates continue to decline and researchers continue to search for methods to reverse or slow this trend. For the 2007 Health Tracking Household Survey (HTHS) we tested the effectiveness of a cash prepayment in the initial mailing to households with a listed address. Results indicate that the cash prepayment was effective in not only increasing response rates, but also in reducing the effort needed to complete an interview, as well as yielding higher cooperation among all eligible respondents within a household.

Key Words: Response rates, incentives, RDD surveys

1. Introduction

The Health Tracking Household Survey (HTHS), previously known as the Community Tracking Study (CTS), is the core research effort of the Center for Studying Health System Change (HSC), a nonpartisan policy research organization in Washington, DC, that is funded by the Robert Wood Johnson Foundation (RWJF). HSC's mission is to inform health-care decision makers about changes in the health-care system at the local and national levels, and to explain how such changes might affect the public. HSC conducts surveys of those affected by changes in the health care system, including households and physicians.

Because response rates to surveys, especially those using random-digit-dialing (RDD), continue to decline, a major focus of data collection efforts is identifying procedures that help maintain response rates. Incentives have been widely accepted as an effective motivator for survey participation, and most findings show that a prepaid incentive is more effective than a promised one (Singer et al. 1999). The use of prepaid incentives for reasons other than refusal conversion on RDD telephone surveys has been less studied and documented. Methodological experiments implemented in the National Survey of American Families, Cantor et al. (2003) and the National Household Education Surveys Program, Brick et al. (2005) suggest that cases that receive a small, prepaid cash incentive sent with the initial mailing for RDD surveys have higher initial cooperation rates.

1.1 Summary of Sample Design

There have been five rounds of this survey to date. MPR interviewed about 60,000 people in 33,000 families for each of the first three rounds of the survey (1996-97, 1998-99, 2000-01). For Round Four (2003), the sample consisted of approximately 47,000 individuals in 25,000 families. Rounds 2 through 4 of the CTS included a portion of telephone numbers that had been selected in previous rounds. The entire round five sample was selected through list-assisted RDD methodology without regard to a prior round. Families in households without a working landline telephone were not represented in the sample. Unlike other rounds of the study, there was no field effort to interview such households face to face. Between April 2007 and February 2008, Round Five interviews with 17,797 people in 9,407 families were completed. The weighted household level response rate was 47 percent.

1.2 Areas of Inquiry

The main focus of HTHS is assessing whether consumer access to the health care system is increasing or declining. Areas of inquiry include health insurance, use of health services, satisfaction with care and health plans, health status, factors affecting health care choices, and demographic characteristics. The survey was administered by computer-assisted telephone interview (CATI).

At the beginning of the interview, a household informant was identified and asked about the composition of the household. Typically, the household informant was the person who answered the telephone, if he or she was age 18 or older. The person who owned or rented the house was identified as the head of the household, or the householder. People who usually lived in the household but who were temporarily living elsewhere, such as college students, were included in the household enumeration. MPR interviewers determined the composition of each household, grouped household members into family insurance units (FIUs), and obtained information about each adult and one randomly selected child in the FIU. The FIU is based on groupings of people typically used by insurance carriers. It includes an adult household member, spouse or partner, and dependent children up to age 18 (or ages 18 to 22 if the child is in school).

A family informant provided information on most topics for each adult in the family and one randomly selected child. In addition, each adult answered subjective questions in a self-response module (SRM) that a proxy respondent could not answer reliably. These included questions on trust, health status, risk behaviors, unmet health needs, details of the last physician visit, satisfaction with health plan, freedom of physician choice, and factors affecting health care choice. The adult family member who accompanied the sampled child to his or her last physician visit was asked questions about that visit. A Spanish version of the instrument was used when appropriate. A full description of survey methodology, including other methods used to increase response, can be found in the Carlson, CyBulski, and Barton paper in this volume.

2. Experimental Methodology

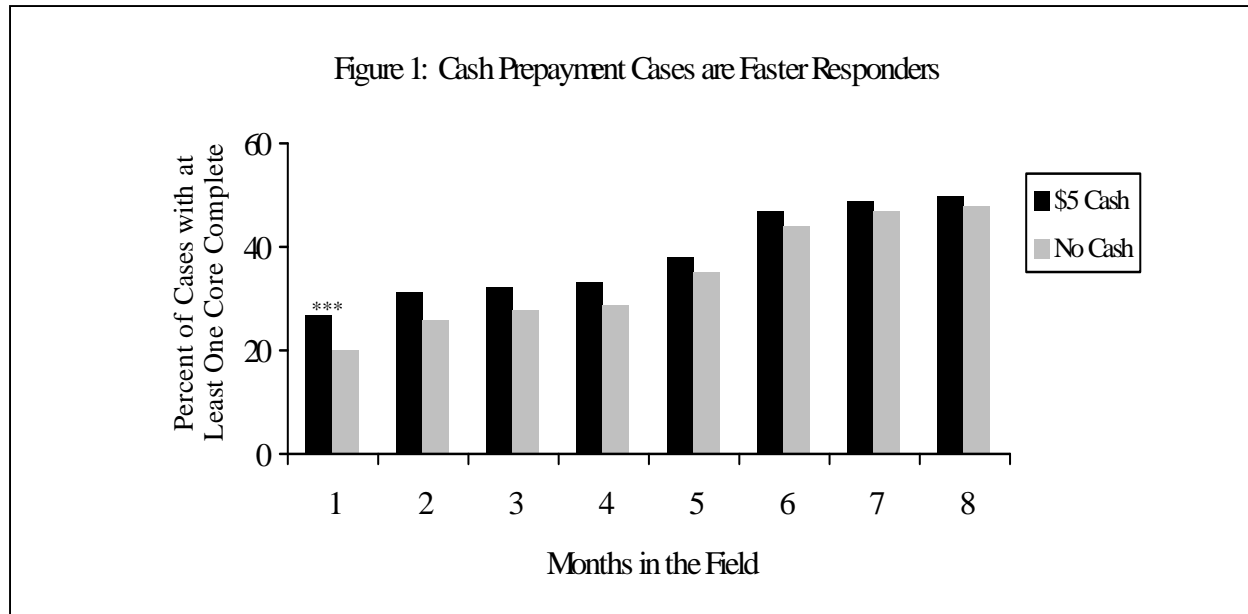
To test the impact of a \$5.00 cash prepayment, MPR statisticians randomly assigned treatment and control conditions to each replicate in a portion of the RDD sample. Treatment cases with listed addresses received the \$5.00 cash prepayment along with contact materials and the promise of a \$20.00 check for each responding adult. Control cases received contact materials and the offer of a \$20.00 check for responding adults, but not the cash prepayment. In total, there were 533 treatment cases and 515 control cases in this experiment. Note that the random assignment was at the sample replicate level and only cases within replicates with listed telephone numbers, and therefore available addresses, were able to receive the advance materials. One hundred forty (140) days after the initial mailing, we sent a \$40.00 check sent to all nonresponding cases with a name. We hypothesized that treatment cases would be less likely to refuse and require fewer contacts to complete the interview. We were not sure if the cash prepayment would have the same effect on other household members or would affect subsequent refusal conversion attempts.

3. Results

A core interview is the interview during which the family informant provides information for each adult and a selected child in the family. On average households had 1.2 FIUs. Thus, each household could have more than one core interview. Additionally, each FIU had 1.5 adults, on average. Thus, each FIU could have additional self response modules (SRMs). Figure 1 shows that one month after the initial mailing, 27 percent of the cash prepayment cases had at least one core interview completed compared to 20 percent of cases that did not receive a cash prepayment. This trend continued throughout the field period. After four months, 33 percent of cases with a cash prepayment had at least one core interview completed compared to 29 percent of cases without a cash prepayment. The completion rate gap began to close at five months following the \$40.00 prepayment to all nonresponding cases and refusal conversion efforts. By month eight, 50 percent of cases that received the cash prepayment had a least one core interview completed compared to 48 percent of cases that did not receive the prepayment. This suggests that cases that receive a small cash prepayment are faster responders, saving interviewer labor and survey management time.

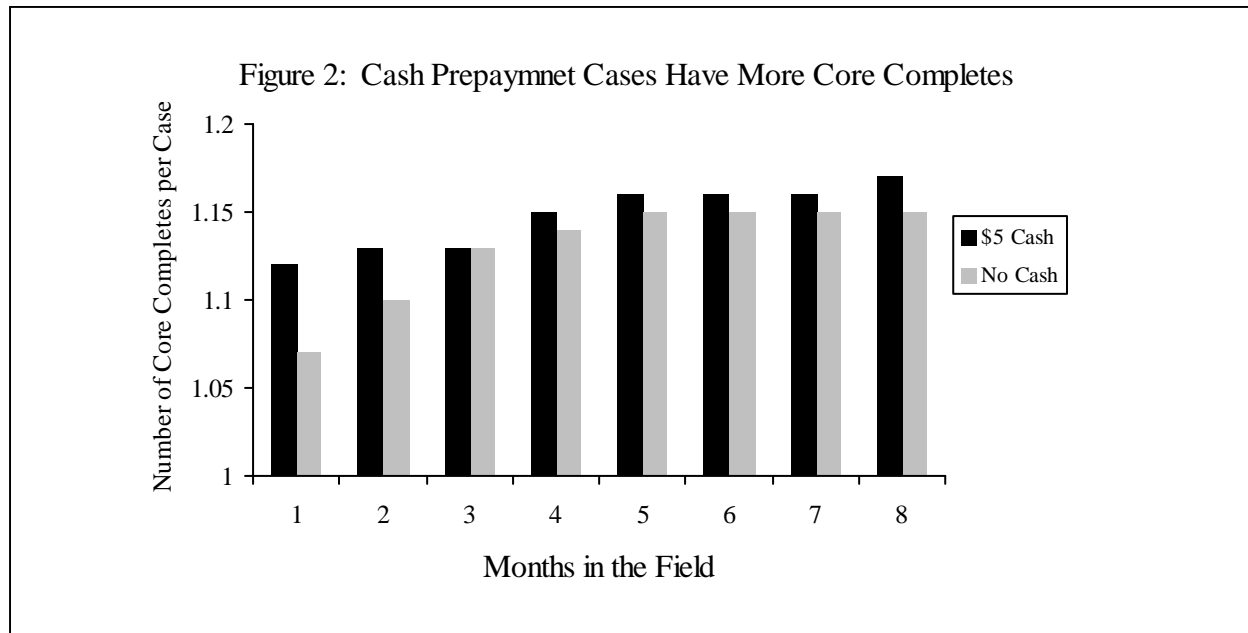
In addition to the presence of a core interview, we looked at the number of core interviews per case. Figure 2 shows that the number of core interviews per case is higher for cases that received a cash prepayment. During month one, the number of core interviews for cases with a cash prepayment was 1.12 compared to 1.07 for cases without a cash prepayment. During month two, it was 1.13 compared to 1.10. By month three, there was no difference in the number of core interviews per case. Cases with or without a cash prepayment had 1.13 core interviews per household. During month four, when all non responding cases were sent \$40.00 prepayment refusal conversion checks, the gap widened, with cases who received the cash prepayment once again having a higher number of core

interviews than cases without the cash prepayment. By month eight, cases with a cash prepayment had 1.17 core interviews compared to 1.15 core interviews for cases without cash prepayments. This suggests the cash prepayment had lasting effects that persisted as long as eight months after the initial mailing.



Denominator = Cases that are eligible or whose eligibility is not yet determined
 ***Significant at $p < 0.01$, **Significant at $p < 0.025$, *Significant at $p < 0.05$

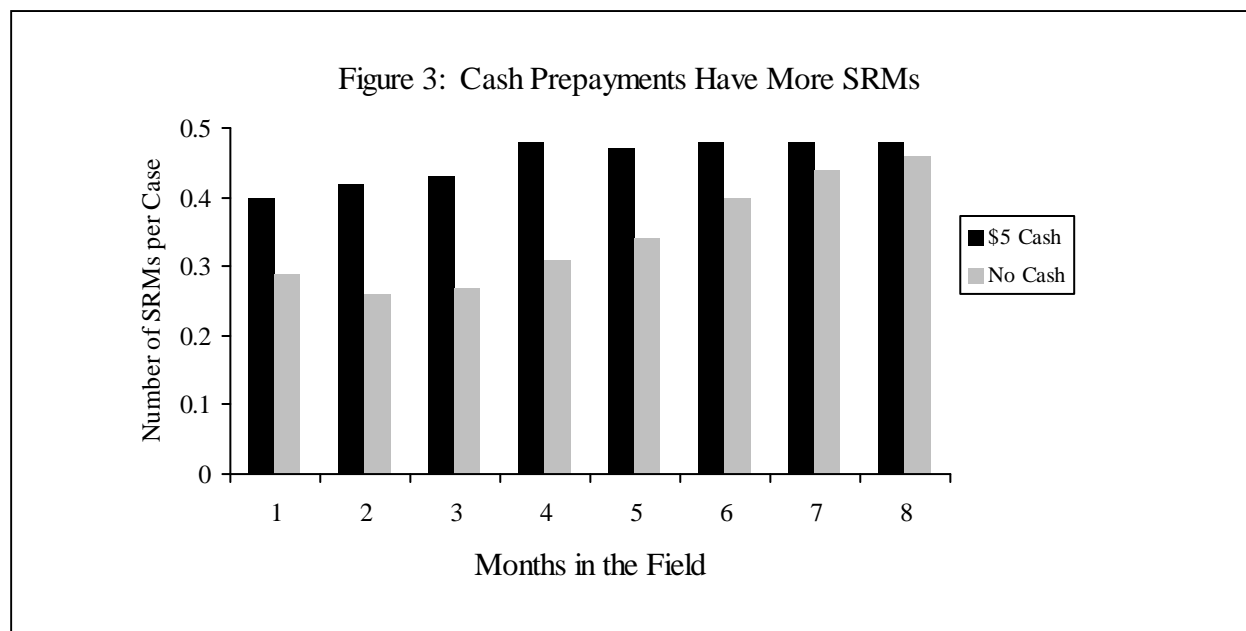
SOURCE: Mathematica Policy Research, 2007 Health Tracking Household Survey



Denominator = Households with at least one core interview completed

SOURCE: Mathematica Policy Research, 2007 Health Tracking Household Survey

Cash prepayments were also associated with the timely completion of SRMs. After a core interview, interviewers attempted to talk to each eligible adult in an FIU. Figure 3 shows that the number SRMs per case is higher for cases that received a cash prepayment than for those that did not. During month one, the number of SRMs for cases with a cash prepayment was 0.4 compared to 0.29 for cases without a cash prepayment. This pattern continued for five months and the gap began to close at month 6, a month and a half after the \$40.00 refusal conversion payment. This suggests that the cash prepayment impacted the entire household, not just the core respondent. We believe the \$5.00 was an investment in social capital.

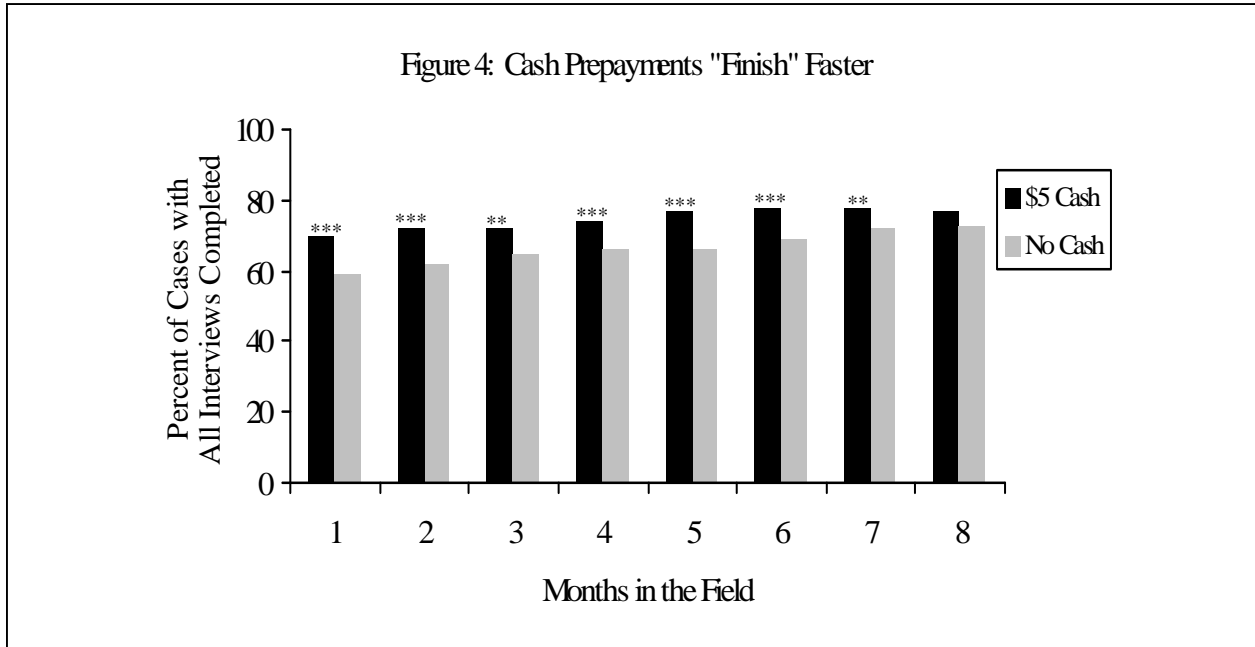


Denominator = Households with at least one core interview completed

SOURCE: Mathematica Policy Research, 2007 Health Tracking Household Survey

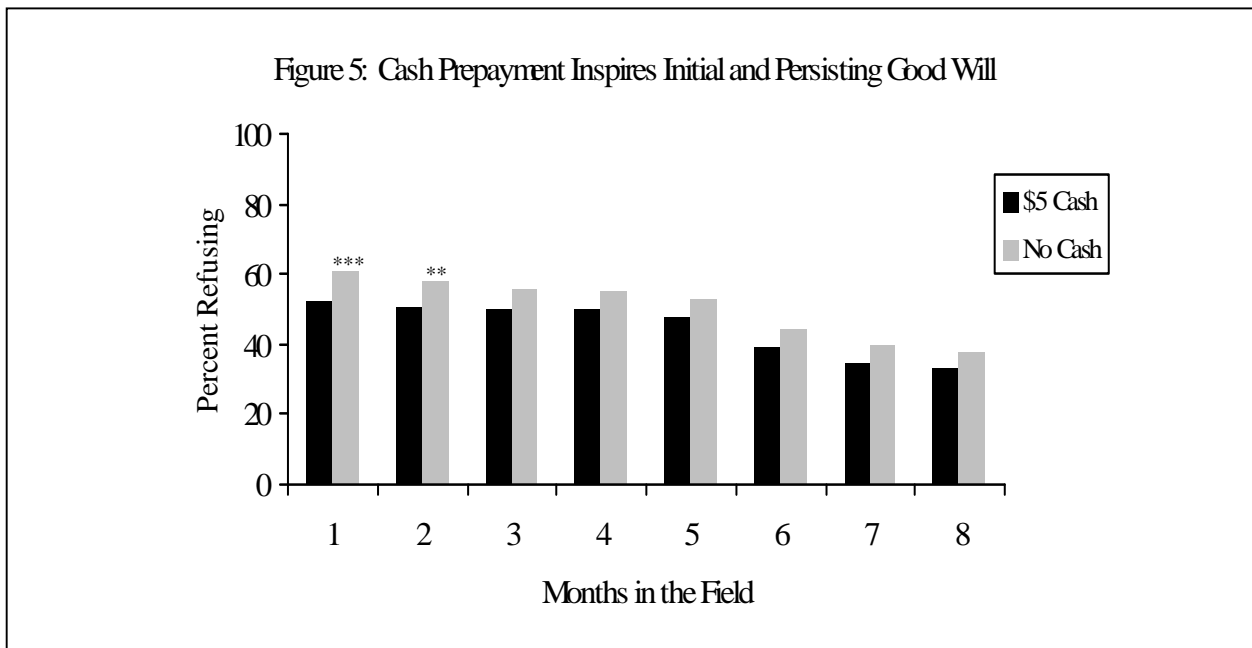
A case was considered “finished” when all eligible adults in the household completed their interviews, that is, all FIU core interviews were complete and all eligible adults in each FIU responded. Figure 4 shows that cases with \$5.00 cash prepayments were significantly more likely to be “finished” than cases that did not receive cash prepayments. This continued during every month of the survey with the gap in “finished” cases narrowing over time. During month one, 70 percent of the prepaid cases with any core complete were “finished” compared to 59 percent of the non-prepaid cases. By month eight, 77 percent of the prepaid cases were “finished” compared to 73 percent of the non-prepaid cases. It took five months longer for the same number of non-prepaid cases to be “finished” than the prepaid cases. This also suggests that a small cash prepayment can save time and resources required to complete a survey.

Refusals were cases that declined to complete the household screener or the first core interview. Interviewers made up to two refusal conversion attempts through out the field period. All non-responding cases, refusals and cases that interviewers were unable to contact (possible passive refusals), were sent a \$40.00 prepaid check 140 days after the initial mailing. Figure 5 shows that cash prepayment cases had a significantly lower initial refusal rate (9 points) than non-prepayment cases. After refusal conversion incentives, the differences in refusal rates between prepayment and non-prepayment cases was cut in half, with the non prepayment cases having a refusal rate 5 percentage points higher than the prepayment cases. This five-point difference continued until the end of the study, suggesting that the initial good will that small cash prepayment inspires persists.



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 ***Significant at $p < .01$, **Significant at $p < .025$, *Significant at $p < .05$

SOURCE: Mathematica Policy Research, 2007 Health Tracking Household Survey



Denominator = Cases that are eligible or whose eligibility is not yet determined
 ***Significant at $p < .01$, **Significant at $p < .025$, *Significant at $p < .05$

SOURCE: Mathematica Policy Research, 2007 Health Tracking Household Survey

4. Discussion

The cash prepayment, while small, had marked and lasting impacts. Not only did it result in more core interviews completed, more SRMs completed, and fewer refusals, it also led to lower interviewer effort and surveys costs. After one month in the field, we calculated that prepaid cases required 2.5 fewer calls to obtain the first core interview for cases that had at least one core interview completed and 10 fewer calls per core complete when all cases in the cohort were taken into account. By the end of the field period, prepaid cases required 1.5 fewer calls to obtain the first core interview for cases that had at least one core interview completed and 7.5 fewer calls per core complete when all cases in the cohort were taken into account. Overall, interviewers made almost 4,000 fewer calls to cases that received the cash prepayment, and the resultant final response rate was 3 points higher than it was for cases without the cash prepay. The prepayment more than paid for itself. In fact, we saved twice the value of the prepayment by making fewer calls. Based on these results, we implemented the cash prepayment for future HTHS sample releases.

References

- Brick, J. M., Montaquila, J., Hagedorn, M., Roth, S., and Chapman, C. Implications for RDD design from an incentive experiment. *Journal of Official Statistics* 2005;21:571-589.
- Cantor D, Cunningham P, Tripplett T, Steinbach R. Comparing incentives at initial and refusal conversion stages on a screening interview for an RDD survey. Paper presented at the August 2003 meetings of the American Statistical Association, San Francisco, CA. Alexandria VA: American Statistical Association, 2003.
- Singer, E., Van Hoewyk, J., Gebler, N., Raghunathan, T. and McGonagle, K. The effect of incentives in interviewer-mediated surveys. *Journal of Official Statistics* 1999;15:217–30.