Using Monetary and Nonmonetary Incentives to Increase Response Rates among African-Americans in Wisconsin PRAMS

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Abstract

Infant mortality rates in the United States are alarmingly high for a developed nation, and in Wisconsin infant mortality rates among African Americans are among the worst in the country. The Pregnancy Risk Assessment Monitoring System (PRAMS), sponsored by the CDC and state health departments, is designed to collect high-quality data on pregnancy and infant health not found in other data sources. However, response rates among African American mothers have been consistently lower than for white mothers. From 2009-2010, an intervention was implemented in Wisconsin to increase participation among African American mothers in PRAMS. Sample members were randomly assigned to groups that received: a prepaid, cash incentive of $5; a coupon for diapers valued at $6; or no incentive. Incentives were included with the PRAMS questionnaire, which was mailed to respondents. We examined the effects of the experimental groups on several outcomes including: response rates; cost effectiveness; survey responses; and item nonresponse. Results showed that response rates were significantly higher for the cash group than for the coupon or no incentive groups; the coupon and no incentive groups performed similarly. While absolute costs were the highest for the cash group, the cost per complete was the lowest. Responses to select survey questions indicated that cash incentives were effective in bringing in lower-income respondents and respondents who were more likely to report engaging in some risky behaviors, and behaviors with potentially negative outcomes on child health. Although respondents completing the survey by mail in the cash and coupon groups exhibited a trend toward being less likely to provide missing data, the effect was not significant. This analysis adds to research on the effectiveness of small, monetary incentives in mail surveys, particularly among minority and low-income groups.

Key Words: Incentives, coupons, response rates, PRAMS, African-Americans, item nonresponse, survey costs

1. Introduction

The infant mortality rate in the United States, estimated at 6.7 deaths per 1,000 live births in 2006, masks large differences between non-Hispanic white and black mothers, whose rates were 5.6 and 13.4, respectively (CDC 2010). In Wisconsin, the disparity between white and black mothers was even greater: 5.0 versus 17.0. An important step in reducing infant mortality is determining the factors that predict its occurrence among all members of the population. PRAMS (Pregnancy Risk Assessment Monitoring System) is a CDC

surveillance system to reduce infant mortality and low birth weight. The multi-modal survey (mail with telephone follow-up for nonresponders) asks about maternal behaviors before, during, and after pregnancy.

In Wisconsin in 2007, only 39% of African American mothers responded to the survey compared to almost 80% of white mothers. In 2008, the response rates had further declined to 34% and 72%, respectively. While the differential rates of participation between African American and white mothers in Wisconsin PRAMS was larger than for other states, the experience of Wisconsin is not uncharacteristic. In their review of response rates by state for 2001, Shulman et al. (2006) reported that response rates in PRAMS were, on average, 13 percentage points lower among black mothers. We report results from an experiment in which African American mothers in Wisconsin PRAMS were provided a monetary, nonmonetary, or no incentive in order to increase levels of participation in the survey.

1.1 Background

Surveys frequently incorporate incentives in their design in order to increase response rates and to compensate respondents for their efforts. The literature on incentives considers three important operational features: timing, form, and value. With regard to their timing, incentives can be included as pre-incentives that are provided in advance or concurrent to the request for participation, or as post-incentives (rewards) that are offered as contingent upon completion of the survey. The form of an incentive can be strictly monetary (e.g., cash or a check), nonmonetary (e.g., a baby bib), or something in-between (e.g., a gift card). Incentives can vary widely in their value ranging, for instance, from a $1 bill clipped to a blank survey to inclusion in a $500 lottery for respondents completing the survey. The use of incentives in PRAMS is pervasive (Gilbert et al. 1999; Shulman et al. 2006). Numerous states offer nonmonetary pre- and post-incentives, including postage stamps, prepaid phone cards, magnetic memo boards, bibs, and birth certificates. Use of monetary incentives, however, has been largely restricted to gift certificates/cards and lotteries, primarily offered as a reward for participation.

While we are not aware of studies that have tested the inclusion of prepaid cash incentives in PRAMS, there is a substantial literature that demonstrates they are effective in increasing response rates, especially for surveys that are mailed to respondents (Church 1993; Edwards et al. 2002). Less effective, and often more costly, are nonmonetary pre-incentives or post-incentives of any kind. Small, monetary pre-incentives have also been shown to be effective in boosting response rates among minority and low-income populations. Among African Americans included in a study of Medicaid enrollees, a $2 pre-incentive resulted in an increase of 10 percentage points compared to a control group that was not given an incentive (Beebe et al. 2005). Response rates were also higher among respondents receiving $1 or $2 versus no incentive in a study of low-income families (Gibson et al. 1999). In an experiment testing pre-incentives among African Americans in Ohio PRAMS, researchers reported that a $10 gift card to a drug store significantly increased the response rate relative to a prepaid phone card (Liu and Geidenberger 2010).

Pre-incentives can also be effective in decreasing field costs (e.g., Beebe et al. 2005). Incentives can increase both the number of sample members who respond and the speed with which they respond to survey requests, thus decreasing the level of effort required to obtain their participation. Although the inclusion of an incentive in the initial wave of a mailed survey increases the initial costs of the survey, incentives may ultimately reduce

costs by decreasing the number of nonrespondents that require subsequent contacts, such as additional mailings and telephone follow-ups.

The inclusion of an incentive can also affect the distribution of survey responses (Singer 2002). Effects can be indirect or direct. Indirect effects occur when the use of an incentive increases the proportion of sample members who would otherwise have been nonresponders, and these sample members differ from other responders on relevant characteristics. For example, incentives may bring in more respondents from underrepresented groups, such as low-income respondents or respondents from minority groups (Singer et al. 1999; Martin et al. 2001). Insofar as income is correlated with the measure of interest, for example receiving Medicaid or smoking cigarettes, the distribution of responses about the measure may differ when an incentive is used because of a change in the composition of respondents. Direct effects occur if something about the incentive causes respondents to answer differently. For example, an incentive could have a positive effect on the respondent's mood, which in turn could motivate the respondent to answer more positively about attitudes or behaviors. Many studies, however, have reported either no or limited effects of incentives on sample composition or survey response distributions (e.g., Mizes et al. 1984; James and Bolstein 1990; Shettle and Mooney 1999; Singer et al. 2000).

Although incentives could decrease data quality if their use encouraged respondents to hastily or carelessly complete the questionnaire in order to obtain the reward, most studies find no effect or a positive effect of incentives on data quality (Singer 2002). As examples, among economically disadvantaged youths interviewed in-person, Kerachsky and Maller (1981) found levels of item nonresponse were the same or better among respondents receiving an incentive. James and Bolstein (1990) reported that respondents receiving larger incentives provided more short answers and wrote more comments in their mail survey of consumers. Singer et al. (2000) reported a reduction in item missing data among nonwhites offered pre- and post-incentives in telephone surveys.

1.2 Current Study

This study examined the effects of a prepaid $5 cash incentive versus a coupon for diapers versus no incentive on several indicators of data quality among African American mothers in Wisconsin PRAMS. The impetus for providing a cash incentive emanated from research on the effectiveness of small, prepaid cash incentives both in the general population and in low-income populations. The diaper coupons were selected for reasons related to partnerships that are common among surveys conducted by state health departments. Program planners at the Wisconsin Department of Health Services conduct outreach in which they work with partner organizations to increase participation in their studies. At outreach meetings for PRAMS, African American women, some of whom were WIC clerks and mothers, provided feedback that the survey was too long. These partners suggested using coupons for diapers to motivate respondents to participate and reward them for their efforts. A second reason for experimenting with coupons was budgetary. The coupons for diapers were obtained at no additional cost from a partner organization. If the coupons proved to be as effective as cash, then fewer state dollars would be required to achieve a comparable response rate. In order to evaluate the impact of the incentives, we examined several outcomes including response rates, survey costs, survey response distributions, and item nonresponse.

2. Methods

2.1 PRAMS Methodology

PRAMS is a population-based, surveillance project conducted collaboratively by the Centers for Disease Control and Prevention (CDC) and 37 state health departments. The objective of PRAMS is to monitor the attitudes and behaviors of mothers before, during, and after pregnancy. While all states follow a standardized protocol for data collection (CDC Website; Dillman 2002; Gilbert et al. 1999), individual states have the flexibility to customize the protocol in order to meet the needs of the state, and to collect data that are of the highest quality.

In the Wisconsin PRAMS, a stratified sample is selected from recent Wisconsin birth certificates and fielded in monthly replicates. The sample for our experiment consisted of 639 African American mothers. Cases were fielded across 11 complete and two half-month replicates from March 2009 to March 2010. Multiple attempts were made to secure participation. An introductory pre-letter was mailed to each woman in the sample two to four months after the baby's birth. The purpose of the pre-letter was to alert mothers to the upcoming questionnaire. The initial PRAMS packet was mailed a few days later. The packet contained several items including a 13-page questionnaire, a cover letter, a consent form, an FAQ, and some token inserts (e.g., calendar, door hanger, MCH hotline brochure, post-it notes, and bath thermometer). Approximately 7 to 10 days after the initial mailing, mothers were sent a "tickler," a note thanking those who had participated and reminding those who had not. A second mail packet was sent to nonrespondents 7 to 14 days after the tickler. A third and final packet was mailed to mothers who had not responded 1 to 2 weeks after the second packet. After three mailings, we attempted to contact nonresponding mothers by telephone to complete the interview. While all replicates received the full set of mailed contacts, due to budget constraints, only the first 4.5 replicates received any telephone follow-up. A total of 171 sample members across the experimental groups received at least 1 phone call. Respondents who completed the survey were also sent a reward packet that included a letter and a compact disc of music.

2.2 Experimental Design

African American mothers were randomly assigned to groups and sent: a $5 cash pre-incentive ($n$ = 219), a coupon for diapers valued at $6 ($n$ = 211),[1] or no incentive (n = 209). If provided, incentives were paper-clipped to the cover letter included in the initial PRAMS packet. Interviewers who called on the study were blind to the experimental conditions, and respondents were not reminded of the incentive in the phone phase.

2.3 Data Analysis

The effects of the incentives were examined for several outcomes including response rates, survey costs, survey responses, and item nonresponse. Of primary interest was the effect of the incentives on levels of participation in the survey. Response rates were calculated as the number of completed or partially completed survey questionnaires divided by the total number of cases fielded among African Americans (RR2; AAPOR 2009). We examined response rates after each contact attempt. Significance tests were from logistic regression models.

[1] Coupons were donated by the Kimberly-Clark Corporation of Neenah, Wisconsin.

We examined total costs and how the cost per completed survey varied across groups. Our analysis includes only variable costs that differed across the groups. For the mail phase of the survey this included all mailing costs (e.g., printing, postage and stuffing of materials), costs associated with the incentives (e.g., their monetary value and administration), and data entry costs. For the telephone phase, we included only costs for the interviewers' time and supervision, and the actual costs to place the phone calls. We included costs for supplies, postage, and assembling the reward packets. We omitted fixed costs that did not vary across the experimental groups in order to focus on the direct effects of incentives on administration costs. We omitted costs related to development, project management, sample management, or data management. We report separately on variable costs incurred for the entire study versus just the mail phase.

We examined responses to several questions in the survey to determine if and how responses might have differed across experimental groups. While we did not have administrative data to examine nonresponse bias directly, we used responses to three questions about finances as proxy measures. Responses were coded as "1" (versus "0" otherwise) if the respondent reported: her household income was less than $20,000; she was covered by Medicaid or some other government-sponsored health program during the month she got pregnant; and/or she was on WIC during her pregnancy. We also examined important variables related to maternal and child health including smoking cigarettes, drinking alcohol, breastfeeding, and infant sleeping practices. For maternal smoking and drinking, responses were coded as "1" (versus "0") if the respondent reported smoking or having any alcoholic drinks in the three months before her pregnancy or in the last three months of pregnancy. Responses were also coded as "1" (versus "0") if the respondent reported: ever breastfeeding or pumping breast milk to feed her baby; laying down her infant to sleep on his or her back most often; and "always" or "often" having the baby sleep in the same bed with her or with someone else. For analyses of responses to the individual questions, we regressed responses to the question on indicators for the experimental groups. We used logistic regression and report the odds ratios to test for significant differences. To make comparisons between the groups (i.e., cash versus coupon, cash versus no incentive, and coupon versus no incentive), we refit the model and vary which experimental group is the reference group (Long and Freese 2006).

We assessed item nonresponse by forming a dichotomous indicator that was coded "1" if the respondent provided any missing data versus "0" if the respondent answered all of the questions that were relevant. We regressed the missing data indicator on indicators for the experimental groups. We used logistic regression and report the odds ratios to test for significant differences. Comparisons are made between the experimental groups by refitting the model with a different base outcome. We report separately on rates of missing data for respondents who completed the survey by mail versus all respondents (including those who completed by phone).

3. Results

3.1 Response Rates

Results for survey participation and costs are shown in Table 1 and Figure 1. The response rate overall was 35.2%. As shown in the table, the effect of the cash incentive was immediate. After the initial mailing (containing the cash incentive or coupon if

applicable) and the reminder tickler, the response rate for the cash group was significantly higher than the coupon group (21.9% vs. 9.5%, $p < .01$) or no incentive group (21.9% vs. 12.0%, $p < .01$), but these groups did not differ from each other ($p > .10$). Following the third mailing, the response rate remained higher for the cash than coupon group (35.2% vs. 23.2%, $p < .01$) or no incentive group (35.2% vs. 23.0%, $p < .01$). After the phone phase was completed, the differences in response rates endured. The response rate after the telephone calling phase remained significantly higher for respondents who received the cash incentive than for those who received the coupon (42.5% vs. 32.7%, $p < .05$) or no incentive (42.5% vs. 30.1%, $p < .01$). There was no difference between the coupon and no incentive groups at any point in the data collection process ($p > .10$).

Table 1 Cumulative unweighted response rates by contact attempt and incentive, African American mothers, Wisconsin PRAMS, March 2009-March 2010, $N = 639$

Incentive	*N*		Contact Attempt (%)				
	Fielded	Completed	Mail 1	Tickler	Mail 2	Mail 3	Phone
Overall	639	174	5.0	14.6	19.1	27.2	35.2
Cash	219	77	8.7	21.9	27.9	35.2	42.5
Coupon	211	49	4.3	9.5	14.2	23.2	32.7
None	209	48	1.9	12.0	14.8	23.0	30.1

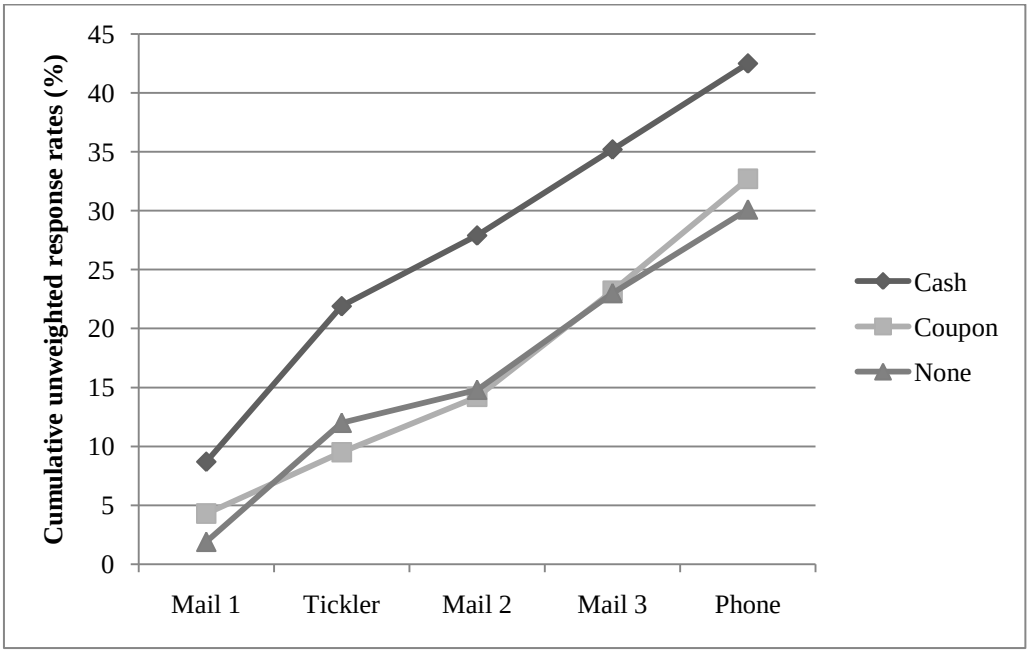

Figure 1 Cumulative unweight response rates by contact attempt and incentive, African American mothers, Wisconsin PRAMS, March 2009-March 2010, $N = 639$

3.2 Costs

The total variable costs for conducting PRAMS during the period of time extending from March 2009 to March 2010 were $16,125. Total costs were higher for the cash group ($6,320) than the coupon group ($4,992) or no incentive group ($4,955). The return rate, however, was much higher for the cash group. As a result, the cost per complete was

lowest for the cash group ($68). The cost per complete for the coupon group ($72) and the control group ($79) were both higher.

Limiting the analysis of costs to those incurred during the mail phase further underscores the cost-effectiveness of the cash incentive. The variable costs for conducting the mail phase of the study were still higher for the cash group ($4,989) than the coupon group ($3,664) or no incentive group ($3,563). But again, because of the higher return rate in the cash group, the cost per complete was the lowest ($65). The cost per complete for the coupon group ($75) and the control group ($74) were almost identical, each close to $10 more per complete over the cash group.

Table 2 Variable costs by incentive, African American mothers, Wisconsin PRAMS, March 2009-March 2010, *N* = 639

Incentive	Variable Costs ($)			
	After Mail Phase		After Phone Phase	
	Total	Per survey	Total	Per survey
Overall	12,216	70	16,125	72
Cash	4,989	65	6,320	68
Coupon	3,664	75	4,992	72
None	3,563	74	4,955	79

3.3 Survey Response Distributions

Table 3 presents the distribution of responses to several key questions included in PRAMS. We tested the possibility that the incentive groups would bring in lower-income respondents by comparing responses to three questions. Although the percentage of respondents reporting an income less than $20,000 was higher for the cash group (76.2%) than the coupon (65.2%) and no incentive groups (63.2%), the difference was only marginally significant for the comparison between the cash versus no incentive group (OR = 1.87, $p < .10$). The odds of reporting being covered by Medicaid were significantly higher in both the cash (OR = 1.98, $p < .05$) and coupon (OR = 2.67, $p < .01$) groups relative to the no incentive group. There were no differences among the groups for reporting about WIC enrollment.

For maternal behaviors that occurred immediately before or during pregnancy – smoking and drinking – results are contradictory. The percentage of respondents reporting smoking is higher in the cash condition, and the comparison between the cash and no incentive groups is significant (OR = 2.36, $p < .05$). However, reporting about drinking was highest among respondents in the no incentive group, and respondents in the coupon group had lower odds of reporting drinking than respondents in the no incentive group (OR = 0.49, $p < .05$).

We examined reports to three questions about childrearing rearing practices that are associated with important child health outcomes, such as breastfeeding, infant sleeping position, and co-sleeping. Respondents in both the cash (63.5%) and coupon (66.2%) groups reported lower levels of breastfeeding than the no incentive group (77.85), and this difference was marginally significant for the comparison between the cash and no incentive groups (OR = 0.50, $p < .10$). Receiving the cash incentive was also associated with increased odds of reporting about co-sleeping relative to the coupon group (OR =

2.13, $p < .05$). There were, however, no significant differences among the experimental groups with regard to reports about the infant's sleeping position.

Table 3 Distribution of responses to survey measures by incentive condition, African American mothers, Wisconsin PRAMS, March 2009-March 2010, $N = 225$

Dependent variables	Response Distribution (%)			Odds Ratios (OR)		
	Cash	Coupon	None	Cash vs Coupon	Cash vs None	Coupon vs None
Income less than $20,000	76.2	65.2	63.2	n.s.	**1.87**$^{+}$	n.s.
Covered by Medicaid or another government-sponsored program	61.3	68.1	44.4	n.s.	**1.98***	**2.67****
On WIC during pregnancy	82.2	82.4	76.2	n.s.	n.s.	n.s.
Smoked in the 3 months before or last 3 months of pregnancy	33.3	23.5	17.5	n.s.	**2.36***	n.s.
Any drinks during the 3 months before or last 3 months of pregnancy	47.8	39.4	57.1	n.s.	n.s.	**0.49***
Ever breastfeed baby	63.5	66.2	77.8	n.s.	**0.50**$^{+}$	n.s.
Baby laid down most often on his or her back	66.7	60.6	60.7	n.s.	n.s.	n.s.
Baby always or often sleeps with respondent or anyone else	36.5	21.2	29.0	**2.13***	n.s.	n.s.

Notes: $^{+}p < .10$; $^{*}p < .05$; $^{**}p < .01$. For some questions, sample sizes varied slightly from the total of 225 due to item-missing data.

3.4 Item Nonresponse

Our analysis of item nonresponse is presented in Table 4. Results are shown separately for all respondents versus just the subsample of respondents who completed the questionnaire by mail. Overall, respondents who completed by mail were more likely to return surveys with missing data, most likely a result of not having an interviewer present to prompt the respondent. Considering the full sample, a higher percentage of cases with item nonresponse were found in the no incentive group (65.1%) followed by the cash group (55.9%) and the coupon group (49.3%). The contrast between the coupon and no incentive group is marginally significant (OR = 0.52, $p < .10$). The effects for the full sample, however, reflect the higher proportion of respondents in the coupon group completing the survey by phone (29.0%) than in the cash (17.2%) or no incentive group (23.8%). Among respondents completing the questionnaire by mail, the rates of missing data are lower in both the cash (58.4%) and coupon (59.2%) groups than the no incentive group (72.9%), but the results are not significant owing to the small sample sizes.

Table 4 Item nonresponse by incentive condition, African American mothers, Wisconsin PRAMS, March 2009-March 2010

Sample	Percent of cases with any missing data (%)			Odds Ratios (OR)		
	Cash	Coupon	None	Cash vs Coupon	Cash vs None	Coupon vs None
All respondents (n = 225)	55.9	49.3	65.1	n.s.	n.s.	**0.52**$^{+}$
Respondents completing by mail only (n = 174)	58.4	59.2	72.9	n.s.	n.s.	n.s.

Notes: $^{+}p < .10$; $^{*}p < .05$; $^{**}p < .01$.

4. Discussion

Results from our experiment demonstrate that a prepaid $5 cash incentive is effective in increasing response rates among African American mothers in Wisconsin PRAMS. The cash incentive raised the response rate by approximately 10 percentage points over a coupon for diapers, and by nearly 13 percentage points over not including an incentive. The coupon for diapers had no effect on response rates. Our findings are consistent with Liu and Geidenberger (2010) who reported that a $10 gift card offered as a pre-incentive increased the response rate by 12 percentage points compared to a prepaid phone card among African Americans in Ohio PRAMS. Taken together these results highlight the effectiveness of enclosing a cash incentive or the equivalent with the PRAMS questionnaire in increasing participation among African American mothers.

However, even though the cash incentive was effective in increasing the response rate relative to using a coupon or no incentive in our experiment, the final response rate of 42.5% in the cash group remains substantially lower than the 70% response rate recommended by PRAMS. Where funds are available, future research should continue to explore the use of cash incentives both for pre-incentives delivered with the mail survey and as post-incentives offered to entice nonresponders to complete the survey during the phone phase.

Our results also highlight the cost-effectiveness of the cash pre-incentive. While the $5 bill increased total variable costs, the cost per complete was lower for the cash group than for the coupon or no incentive group. Drawing on our findings that the cash incentive was effective in both increasing response rates and reducing costs, we recommend testing pre-incentives for larger amounts, such as for $10 or $20. Although these amounts might seem out of scope for PRAMS, insofar as larger pre-incentives motivate more respondents to complete the survey by mail and earlier in the field period, the larger incentives could ultimately increase response rates and reduce costs by decreasing the number of sample members that have to be contacted during the more expensive phone phase.

While increasing response rates in a cost-effective manner is necessary in order to provide adequate statistical power to determine which behaviors are related to maternal and child health, we had also hoped to improve data quality by reducing nonresponse bias. Our results provide some support that the incentives, particularly the cash incentive, were effective in drawing in members from more underrepresented groups (Ryu et al. 2006; Singer et al. 2000; Berlin et al. 1992), and groups that had engaged in behaviors with negative maternal and child health outcomes. We found that in comparison to not

receiving an incentive, the odds of reporting an income less than $20,000 or being covered by Medicaid were higher among respondents who received a cash pre-incentive. Medicaid coverage was also higher in the coupon group. There were no differences, however, among the groups for WIC enrollment, which contrasts Liu and Geidenberger (2010) who reported enrollment in WIC increased survey participation among African American in Ohio PRAMS. By bringing in these lower income households, we may have increased the proportion of respondents who engage in specific risky behaviors, but our results are somewhat mixed. While respondents who received a prepaid cash incentive were more likely to report smoking, not breastfeeding, and co-sleeping, we did not find a similar pattern with reports about drinking alcohol or the infant's sleeping position. Our interpretation of these results data is not that the incentive influenced how respondents answered the questions, but rather that respondents who engage in these behaviors are typically underrepresented in Wisconsin PRAMS, and the cash incentive was more effective in drawing in sample members with these patterns of behavior. insofar as smoking, not breastfeeding, and co-sleeping are important predictors of negative outcomes, increasing the proportion of the sample who engage in these negative behaviors is an important step in helping to reduce infant mortality and low birth weight.

We note several limitations to our study. First, we did not have access to administrative data which would have allowed us examine nonresponse bias more directly. We presumed that increasing the proportion of respondents from lower-income households led to a reduction in nonresponse bias on several key measures, and although this is likely, it remains speculative. Second, although the inclusion of a coupon as a pre-incentive did not affect response rates, it is possible that the coupon went unnoticed by many respondents. The mailing packet sent to respondents contained many items, including informational inserts, consent forms, and other token incentives. The addition of a coupon may have been less noticeable in these packets, serving not as a unique incentive, but as an additional token. Third, our study would have benefited from a larger sample size, which would have allowed us to detect smaller differences. Some trends appeared meaningful, but were not statistically significant. For example, while we reported a trend for less item-missing data in the cash and coupon groups among respondents answering by mail, the differences were not statistically significant. If we could determine with more certainty that the inclusion of incentives improved data quality for those completing by mail, it would strengthen our argument to increase prepaid incentives to entice more respondents to participate during the mail phase of data collection. Finally, because of limited funding for Wisconsin PRAMS, not all sample replicates received the telephone follow-up treatment. Although all three experimental groups received the phone treatment equally, it would have been more valuable if the entire sample of nonresponders by mail had been called by phone. This would have allowed us to answer several outstanding questions, such as does the phone phase reduce differential nonresponse bias or increase it, how would the incentive impact the maximum achievable response rate, and how would item nonresponse differ between surveys completed by mail versus phone.

In conclusion, it is important to emphasize that our analysis of costs was conservative as we focused only on costs that varied across the incentive groups. We did not include costs related to switching from the mail phase to phone phase. Converting to phone requires an enormous amount of fixed expenses related to tracking and locating telephone numbers, managing the sample, and training interviewers. Because PRAMS has a long field period with small sample sizes in each replicate, the cost for the phone phase is very expensive overall. We believe it would be extremely useful to compare a version of

Wisconsin PRAMS conducted exclusively by mail and including a large cash pre-incentive against the current multi-modal version. To evaluate the success of the comparison we recommend examining not only response rates, but also cost-effectiveness, nonresponse bias, and item nonresponse. Comparing response rates against total costs and measures of overall data quality might provide evidence for eliminating the expensive telephone mode altogether. While the use of cash incentives with state-sponsored studies can be controversial, it is largely political and not methodological. This is unfortunate because prepaid cash incentives are consistently effective not only for increasing response rates and reducing costs per completed survey, but they also are often effective in improving overall data quality.

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