

## B R I E F

### Introduction

Household surveys play an important role in collecting cross-sectional information across time among population subgroups including demographics, health and nutrition risk factors and coverage of interventions.<sup>1</sup> During COVID-19 related lockdowns, phone surveys became a popular modality to collect such information in a safe and cost-effective manner.<sup>2</sup>

Compared to surveys using in-person interviews, phone-based surveys have limitations of non-representativeness and non-response errors which can result in biased estimates.<sup>3</sup> There are, however, ways to mitigate some of these challenges (**Table 1**).

**Table 1: Summary of challenges of phone-based surveys and potential solutions**

Challenges	Solutions
<b>Low Response Rate</b> i. non-functional mobile phone due to lack of airtime or due to lack of electricity to recharge the battery ii. non-availability of respondents due to difficulty in determining the best time to call	Using a structured call-back protocol, calling at different times of the day, and providing airtime incentives could increase response rates to phone surveys <sup>3</sup>
<b>Difficulty in Building Trust with Respondent</b>	Conducting an in-person home visit in advance of contacting participants by phone
<b>Lack of Privacy and Socially Desirable Responses</b>	Asking the respondent if the phone is on speaker and asking to turn off speaker phone to avoid others listening to the questions <sup>5</sup>
<b>Language Issues and Hearing Disabilities</b>	In both instances, household members may respond to the survey only to the questions that are not respondent specific <sup>5</sup>
<b>Lack of Respondent Attentiveness<sup>4,5</sup></b>	Reducing the length of the survey; Asking clear and easy-to-understand questions

From November to December of 2021, we conducted a phone survey with mothers of children under two years of age in six states in India (Chhattisgarh, Gujarat, Madhya Pradesh, Odisha, Telangana, and Uttar Pradesh). The primary objective of the survey was to quantify rates of food insecurity, diet quality and access to interventions during the COVID-19 pandemic. Nested within this survey design, we conducted an experiment in Madhya Pradesh that aimed to test two recommended methods for improving the phone survey response rate: a) conducting an in-person home visit in advance of contacting participants by phone (i.e., trust building); and b) offering financial incentive for participating in the survey (i.e., equivalent of 100 rupees mobile airtime). This brief summarizes design, implementation, costs, and impact on response rates in Madhya Pradesh.

### What did we do?

In Madhya Pradesh, we divided 90 villages across three districts into two groups, one that would receive a pre-survey in person contact and the other that would not. The intent was to visit women in their homes to ask for their phone number and explain the study (five to ten minutes) and then later the same day call for the interview (30-40 minutes). We further divided each group of women into two sub-groups related to timing of mention of the incentive.

The first sub-group would receive information about the incentive prior to asking for consent to participate and the second would learn about the incentive after they initially consented or declined to participate in the study (**Figure 1**). Regardless of timing of the incentive mention, all women were to be provided with the airtime as compensation for their participation.

This original design assumed that we would obtain phone numbers for the group without the in-person visit through frontline workers (FLW) who manage community-level programs for pregnant and lactating women. However, in practice, the study team quickly discovered that this was not a feasible approach for obtaining phone numbers and therefore had to make changes to the experimental design. Instead, the study team identified women using a snowball sampling method and made a pre-visit to all study households prior to the phone survey. As a result, we did not test the effect of pre-visits on the response rate; however, we did proceed with testing the timing of disclosing the financial incentive during the home visit.

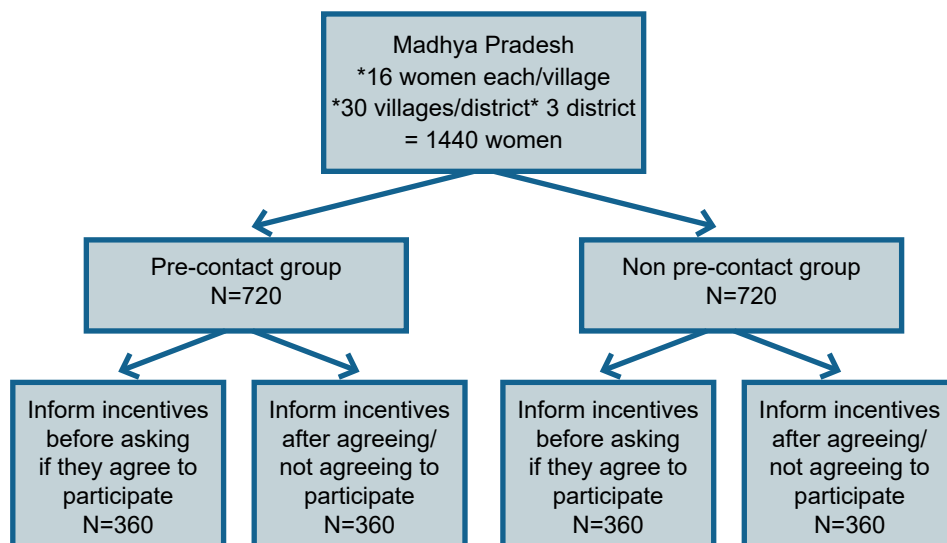


Figure 1: Original experimental design

To quantify the level of effort required to implement the pre-visit followed by a phone call, [we compared costs](#) with data from a 2020 phone survey conducted by IFPRI in Uttar Pradesh among women with children below two years. The 2020 survey did not include a home visit; rather it used pre-existing contacts obtained from households during a previous in-person survey in 2019. We compared the person days (time) required to conduct one interview between phone survey in Uttar Pradesh and the current hybrid survey in Uttar Pradesh and Madhya Pradesh. We selected Uttar Pradesh among the six states where the survey was conducted as it was a common state between the two surveys. In Uttar Pradesh, women who did not agree to be interviewed were replaced by other women to achieve the original sample size. We also included Madhya Pradesh because women who did not agree to be interviewed were not replaced by other women, thus we could calculate the true response rate.

## What did we find?

### Finding #1: The hybrid (pre-visit + call) data collection method helped achieve higher response rate but at the cost of time and resources

There was higher response rate in hybrid surveys (85% in Madhya Pradesh and 92% in Uttar Pradesh) compared to phone survey (40%) (**Table 2**). The person days (time) required to conduct one interview was more than double in the hybrid survey (0.23 in Madhya Pradesh and 0.22 in Uttar Pradesh) compared to the phone survey (0.10). We were not able to test the difference in response rates between women who received pre-visit and women who did not; it is plausible that a pre-visit with potential respondents helped build trust and could have contributed to a high response rate (85%) in the hybrid survey.

Table 2: Comparison of level of effort between phone survey and hybrid survey

	Phone survey Uttar Pradesh*	COVID-19 hybrid survey Uttar Pradesh	COVID-19 hybrid survey Madhya Pradesh
Interview duration (minutes)	30	30	30
Pre-visit to households	No	Yes	Yes
Total person days	219	242	330
Person days for survey with women	145	-	-

	Phone survey Uttar Pradesh*	COVID-19 hybrid survey Uttar Pradesh	COVID-19 hybrid survey Madhya Pradesh
Sample size (No. women contacted)	1,461	1,089	1,454
Person days (time) required to conduct one interview	0.10	0.22	0.23
Response rate	40%	92%	85%

\*Phone survey with women with children < 24m in Uttar Pradesh was conducted by IFPRI in 2020.

### Finding #2: Disclosure of the financial incentive had an effect on the response rate

Financial incentive affected consent to participate in the survey in Madhya Pradesh. The consent rate was higher among women who received information about the incentive for participation along with information about the study than those who did not receive information about incentive (85.3% vs. 49.1%;  $p=0.00$ ). An additional 35% women in the latter group agreed to participate after information about the incentive was revealed to them, raising the overall consent rate in this group to 84.2%, which was similar to the other group (85.3% vs. 84.2%;  $p=0.51$ ).

## Conclusion

Phone surveys are an important modality for collecting information from the population during the COVID-19 pandemic. However, concerns about non-representativeness and low response rates increased as the pandemic progressed. Adopting a hybrid method of pre-visit followed by a phone call helped build rapport, get accurate phone numbers, and potentially contributed to high response rate. The hybrid method limits in-person contact time between the respondents and the interviewers. However, the hybrid method does require significantly more resources to implement, and these trade-offs must be considered. Another reason for high response rate was the financial incentive offered to the women which prompted them to participate in the study. Further research is needed to rigorously test the hybrid approach and compare it with other innovative methods using a common sampling frame.

## References

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## About this Brief

*This analysis was led by International Food Policy Research Institute (IFPRI) as part of the Data for Decisions to Expand Nutrition Transformation (DataDENT) initiative. DataDENT is a five-year initiative (2017-2022) that aims to transform the availability and use of nutrition data by addressing gaps in nutrition measurement and advocating for stronger nutrition data systems. DataDENT is funded by the Bill & Melinda Gates Foundation.*

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