

Replication RCT Evaluating Immunization Incentives and SMS Reminders Program at Scale

The study will use a randomized controlled trial (RCT) design to evaluate the effectiveness of incentives and SMS reminders in increasing full routine immunization coverage in the Indian state of Haryana. The evaluation will test the scalability of this approach through the government. The immunization incentives program is based on an evaluation of one of the most successful and policy-relevant studies J-PAL has implemented in the last ten years, as well as replication at scale of the work of another team of researchers (Interactive Research & Development in Pakistan). This replication-at-scale study has been designed through a year of intensive policy outreach in the state culminating in a MoU with the health department and support of top officials. USAID has committed to providing funding for the program and part of the evaluation through a Development Innovation Ventures stage two grant.

The researchers are seeking to raise an additional US\$423,000 to improve the quality and policy relevance of the replication and its evaluation. The funds would cover

- (1) A mapping and census of 980 villages to map eligible households with pregnant mothers and young children. The census is important for two reasons:
 - a. It is essential for precise measurement of impact
 - b. It is also integral to a new component of the study which will evaluate the effect at scale of including text message reminders to pregnant mothers
- (2) A SMS (text message) reminder intervention to remind mothers of the camps and of the specific vaccine that is due for their child.

This study builds on the previous evaluation by J-PAL in Udaipur district of Rajasthan state. Esther Duflo, co-founder/director of J-PAL and one of the authors of the Udaipur study, is the lead Principal Investigator of this follow-up evaluation in Haryana. The evaluation will replicate at scale a very similar program integrating incentives into the government routine immunization framework through a direct collaboration with the National Health Mission (NHM).

The study will cover a total of 140 Primary Health Centres (PHCs) across six or seven low performing districts of the state. These 140 PHCs will be randomly divided into two groups. One group of 70 PHCs, the treatment group, will receive non-cash incentives to distribute with the regular supply of vaccines at the immunization camps. Nurses will distribute incentives to the parents who have their children aged between 0 and 12 months immunized at the sessions. A more expensive incentive (probably cell phone minutes) will be provided when the child completes the full course of five routine immunizations. Impact will be measured by comparing full immunization rates to a second group of 70 PHCs which will not run the incentives program.

From the villages covered by each of the 140 PHCs, 7 villages per PHC would be randomly sampled, calculating to a total sample of 980 villages. Within each of the 980 villages, 15 eligible households i.e. households with children between 0-36 months would be sampled, calculating to a total sample size of 14,700 households.

A mapping and census exercise will be conducted as part of the larger data collection activities of the project. Originally the research team planned to use the government's Maternal and Child

Tracking System (MCTS) data on pregnant mothers and children under three years of age for sampling and to estimate full immunization rates. This will be what the government starts from, since this is the data that is currently available to them. However, the research team discovered in the field that there are large gaps in these data and concluded that the MCTS would be an unreliable data source for a rigorous study. A mapping and census in each of the 980 villages will be required for random sampling, random assignment of text message intervention, and to accurately measure full immunization rates and the overall impact of the program.

A cross-randomized experiment will test the effectiveness at scale of text messages to mothers reminding them to immunize their children. This is based on strong evidence in general of the effectiveness of text reminders as a nudge and, in particular, a RCT in Pakistan showing that text message reminders can increase full immunization rates. Households would be randomly assigned to receive a generic text message on the immunization programme mentioning the benefits of getting their child immunized along with the dates of session camps. A further subsection of the treatment households would be selected to receive an additional text message personalized to their child's immunization cycle, reminding the beneficiary of the next due vaccine. This experiment will be carried out in a sub-sample of 300 villages across the six study districts.

The entire incentives program will be closely monitored by both the government and J-PAL South Asia. In particular, there will be joint mechanisms to monitor the regularity and reliability of immunization sessions and the distribution of incentives through the existing government infrastructure.