



Quality Assurance of IDinsight’s Evaluation of the New Incentives Conditional Cash Transfer Program for Immunization in Northern Nigeria

Prepared for New Incentives on the quality and completeness of IDinsight’s evaluation of the New Incentives CCT program

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Summary of review

3ie agreed to serve as an independent quality assurance partner to ensure that the evaluation of New Incentives’ Conditional Cash Transfer program to improve immunization coverage in northern Nigeria was fair, robust, and accurate. The results of the evaluation would inform GiveWell’s determination of whether New Incentives would become a “Top Charity”, and thus whether they would recommend funding—an estimated \$20 million recommendation. The implications of such a recommendation meant that the evaluation would need to stand up to high levels of scrutiny, whether it showed no effect or a large effect.

Baseline and randomization

I received explanations and Stata data files for randomizing the study clinics. I corrected one coding error. IDinsight caught a Stata import error and corrected it prior to a second draft. There were a few errors in randomizing Jigawa clinics, resulting in a small imbalance between the number randomized to control (1 fewer) and treatment (1 more). We decided to leave it unbalanced. In addition, the original code was not “seeded” resulting in new randomization results when re-run; IDinsight added a seed to correct this. Finally, Kairu was removed in one round and errantly not added back in the second round but included in a third round. This error does not affect randomization validity.

The baseline design and data collection were done prior to my participation. In assessing the success of the randomization, I noted that baseline vaccination coverage rates and characteristics were generally balanced between treatment and control with a few minor differences. IDinsight planned to control for baseline coverage rates and a few individual/household characteristics in the final analysis. However, no baseline for Jigawa was done—ultimately IDinsight decided to use a “0” coverage rate for all of Jigawa, allowing the state to take the variance and perform no comparison between Jigawa and other states.

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I provided comments on the baseline report to ensure clarity in understanding the context of the intervention and the relevant vaccines. I also recommended strengthening descriptions of evaluation independence and the objectives of the baseline evaluation. In addition, all parties noted that the government was planning measles vaccination campaigns and that IDinsight would need to account for these campaigns in the final analysis.

I also noted the sampling technique implemented did not ensure a fully representative sample. Also, the number of eligible infants was smaller than anticipated and a few older infants were included to obtain the desired sample size. IDinsight corrected the sampling method for endline. While the baseline sampling was not done representatively, we determined that since the endline would only use the baseline rates as a control variable (and not for a difference-in-differences assessment), the effect on the results would likely be minimal.

Endline pre-analysis plan

The pre-analysis plan was written after the baseline assessment. I provided comments to strengthen the description: providing added detail on definitions, methods, and objectives. The sampling description required more and clearer details to enable readers to understand and be able to replicate the sample.

Endline design

The experience from baseline also produced several recommendations or adjustments for endline. First, compact segment sampling was implemented correctly, using geographic area to serve as a proxy for population. Given the lack of accurate census information, we made an assumption that a proportion of the clinic catchment area was equivalent to the same proportion of the population. Thus, compact segment sampling surveyed all the households in a pre-specified proportion of each settlements' equal-sized segments.

We considered a few different geographic proportions. While the group felt that 50% would guarantee the target sample size, cost and time considerations made a 25% sample more attractive. At endline, although substantially fewer than the targeted 42 infants per clinic (on average) were identified and surveyed, the sample was sufficient to provide an adequately precise estimate of effect. Additionally, the difference between 25 and 42 infants per cluster (per randomized clinic) did not greatly increase the statistical power.

To ensure that all households in a sampled segment were surveyed, IDinsight designed and carried out a mapping exercise to verify households. IDinsight used the information to create household listings for endline. There was a discrepancy in the list of settlements in each clinic catchment between New Incentives' list and the clinic lists, and these differences were used in robustness checks in the endline assessment. Whether different settlements were included in the analysis or not did not affect the interpretation of the results.

A few other adjustments from baseline were made for endline. IDinsight used new methods for obtaining the age of the infants, they added or modified questions to get accurate information on where vaccines were received and when.

The team considered the use of biomarkers (using oral swab tests) to verify receipt of vaccination (specifically, measles) to evaluate the accuracy of self-report. However, the sensitivity and specificity of biomarker tests were not high enough to be valuable.

The endline evaluation implementation went relatively smoothly. A few enumerators were caught cheating and fired, and their work was re-done. A few households were surveyed that were later deemed outside the catchment, and a few interviewers accidentally skipped questions. IDinsight either repeated surveys when necessary, corrected surveys, or dropped surveys to adjust.

Endline

I reviewed endline Stata data files and coding. A variable label typo was noted and corrected, and IDinsight clarified the calculation and use of baseline coverage rates. At my request, IDinsight added a robustness check that dropped baseline rates from the regression control variables, but this did not substantially change the results. I also requested a few additional details about Jigawa, as well as the number of settlements not divided into 4 segments (where a different proportion other than 25% was surveyed due to small or large areas).

Conclusion

Overall, I found that IDinsight was receptive to suggestions, made major adjustments between baseline and endline that substantially improved the design, was diligent in documenting the Stata code, and their work and assessment are a valid assessment of the New Incentives Conditional Cash Transfer program. While there are remaining questions about the change in coverage (greatly improved) in control areas, and the poor accuracy of the biomarkers and its implications for the efficacy of the measles vaccine in Nigeria, we do not believe that these questions change the interpretation and conclusions of the study. The New Incentives program substantially and significantly increased immunizations rates.

My quality assurance of the study design, implementation, reports and coding caught randomization errors and changed the sampling objective and implementation (from clinic-representative to study-representative, and non-representative to population proportional to size). The participation of two external participants—a third party evaluator selected by the funder, and a third party quality assurer selected by the evaluated implementer, gave both stakeholders confidence that the study was designed and implemented in a rigorous manor and that the results would stand up to high levels of scrutiny. Like back-checking data collection, the quality assurance I provided may have promoted a higher level of diligence and self-checking by IDinsight. However, I was impressed with their care to address concerns and their documentation in their Stata code, and their transparency in reporting problems, challenges, solutions and successes.