



## *Community Performance-Based Financing*

### Spotlights on:

- 1- Assessing local capacity and needs to build the IE team
- 2- Validating IE Design and Engaging Policy Discussions with Ex-Post Power Calculations
- 3- Endline and Baseline Results Dissemination and Policy Dialogue

### Assessing local capacity and needs to build the IE team

#### 1. Background

**Initial collaboration among the team:** The planning for the Rwanda Community Performance-Based Financing (PBF) Project began with three joint missions by the project design and impact evaluation teams led by the project task team leader in July 2008, April 2009 and June 2009. The coordination between teams allowed for collaborative and consistent dialogue between the World Bank, Ministry of Health and development partners on the policy objectives of the Community PBF project and the related research priorities of its impact evaluation. By June 2009, a clearly defined technical paper outlining the research questions and evaluation design was circulated to key stakeholders and preparation for the baseline data collection was initiated.

#### 2. Country Experience

**Team structure:** As with any large scale, national impact evaluation, the impact evaluation of the Rwanda Community PBF project required a diverse team of researchers and technical specialists. Under the leadership of the project task team leader, the team identified the following requirements for technical assistance for the impact evaluation team: (i) one principal investigator based in Washington, DC, USA to provide high-level technical support on the design of the evaluation; (ii) one coordinator based in Washington, DC, USA to provide technical support on the design, as well as provide intensive day-to-day support of the management of the evaluation team's time and deliverables and considerable time in-country supporting preparation and implementation; (iii) two researchers based in Kigali, Rwanda to provide technical support on the evaluation design, particularly related to questionnaire development, field sampling strategy and data quality assurance; and (iv) one data collection firm based in Kigali, Rwanda to manage data collection at the community health worker cooperative, community health worker and household levels.

**Team needs assessment and additional technical assistance:** Based on an early assessment of the data collection firm's capacity by the international and local researchers, two additional data quality assurance experts were contracted to provide technical support on development of the data entry program, advise on field work management and the process of collecting, transporting and entering

data. While the international and local researchers provided continual support throughout the 2009-2010 baseline data collection phase, the data quality assurance experts were brought in for two specific missions: one mission to pilot test the questionnaires and field work management strategy, and one mission following initiation of data collection to advise on on-going processes.

### **3. Lessons Learned**

- Throughout the baseline preparation and implementation phases, the involvement of the two local researchers was crucial for addressing several challenges facing the quality of data collection.
  - First, the data collection firm required significant support and supervision during the adaptation and translation of the questionnaires into the local language Kinyarwanda.
  - Second, although the firm's contract was competitively awarded, the team had limited experience coordinating a large scale household survey. The two local researchers were selected based on their extensive experience supporting 2000-4000 household surveys in the health sector and were able to provide substantial guidance to the data collection firm on field sampling and field work management.
  - Third, the data collection firm significantly under-budgeted some key aspects of the data collection activities, which resulted in some reductions in planned activities. The presence of the two local research to supervise field work, conduct random spot checks, communicate with field workers enabled the evaluation team to maintain a high standard of quality assurance in the presence of many challenges facing the data collection firm.
- In addition, over the course of the preparation of the project, the local researchers were able to maintain dialogue with the Ministry of Health and development partners, notifying the Washington, DC based team of any necessary changes to study design, updates in sample, or changes in timeline. This allowed for a flow of information between the various team members to coordinate activities between the project implementation and baseline data collection. Additionally the two researchers represented the PI of the study locally by presenting the study to the Rwanda IRB and other regulatory bodies in the country.
- The two data management experts conducted an extensive capacity building for the data manager of the data collection firms and impacted the overall data management culture of the organization as regard to the use of CS-Pro software for management of large scale surveys.

## Validating IE Design and Engaging Policy Discussions with Ex-Post Power Calculations

### 1. Background

**Intervention and Impact Evaluation:** The Community Performance-Based Financing (CPBF) intervention has been implemented since December 2010 in Rwanda. At the design stage, ex-ante power calculations indicated that the impact evaluation required 50 sectors for each of the four study arms, resulting in a total of 200 sectors. 600 households were needed per study arm.

**Data collection:** The household baseline data for the IE was collected from February to May 2010, and the baseline report written subsequently.

**Validation of impact evaluation design:** As part of the IE design validation, the team conducted ex-post power calculations on the baseline data collected. The goal was to ensure the actual sample sizes and sampling from the field allowed to detect a reasonable effect size of the intervention for a given power and a given confidence level, and assess to what degree the results from baseline matched the results expected at the design stage.

### 2. Country Experience

**Methodology:** The research team used a set of core outcome indicators calculated from the household baseline data. The 14 binary indicators were selected based on their likeliness to be impacted by the program:

- ANC coverage (1+ visit),
- Timely ANC (prior to 4<sup>th</sup> month of pregnancy),
- ANC coverage (4+ visits),
- TT2 coverage during pregnancy,
- 90-day iron supplementation during pregnancy,
- Skilled delivery,
- Delivery in a formal health facility,
- Low-birth-weight newborns,
- Timely initiation of breastfeeding,
- Exclusive breastfeeding (0-6 months),
- Timely PNC visit in a formal health facility,
- Postnatal supplementation with vitamin A,
- Modern contraceptive prevalence,
- Unmet need for Family Planning

The statistical model was defined based on the design of the study: a blocked 2-level cluster randomized trial, where sectors were blocked by poverty level and the data clustered at the sector level. Treatment was allocated at the sector level. Type 1 error rate was defined as 0.05 and desired power as 80%.

**Results:** For the set of outcomes studied, the minimum detectable effect ranged from 0.06 to 0.12. Since ex-ante power calculations were based on a minimum detectable effect of 0.2, the team concluded ex-post minimum detectable effect sizes were within range and could be reached by the intervention.

***Policy discussions based on results:*** The team started two discussions based on those results.

First, for indicators that were already high, the results of the power calculations raised the question of the ability to reach those minimum detectable effects. For example skilled delivery had to increase from 89% at baseline to 96% at endline for the increase to be detected by the IE. The team assessed how existing non-Results Based Financing Community Health Workers packages, defined to improve maternal health, could contribute in impacting those harder to reach indicators.

Second, the magnitude of the minimum detectable effect sizes was confronted to the relatively slow progress in increasing key indicators showed by monitoring data. As a result, the team concluded the duration of the experiment had to be extended for those minimum effects to be produced - and hence detected by the IE. The Government decided to maintain treatment and comparison groups until January 2013, as opposed to the initial June 2012 planned.

### ***3. Lessons Learned***

- Ex-post power calculations are not only a statistical exercise. In the case of Rwanda, they first contributed to the validation of the IE design, in combination with other external and internal validity checks.
- Second, the Rwanda team identified which outcomes would be the most challenging to improve if their baseline value was high and/or the magnitude of the minimum detectable effect size was large and/or the progress monitored so far was slow. This assessment led the team to discuss the supplementation of other MCH interventions to the CPBF program and make a clear decision on the duration of exposure to the experiment.
- The exercise led to a fruitful debate engaging the government to support randomized impact evaluation not as an expensive scientific/ academic task but rather an important tool for policy dialogue.

## Endline and Baseline Results Dissemination and Policy Dialogue

### 1. Background

**Health facility PBF:** The health facility Performance-Based Financing (PBF) project has been implemented in Rwanda since 2006. The impact evaluation of the program was conducted, and the results of this impact evaluation are being released through publications.

**Community PBF:** The Community Performance-Based Financing (CPBF) intervention has been implemented since December 2010 in Rwanda. The household, Community Health Worker (CHW) and CHW cooperative baseline data for the IE was collected from February to May 2010, and baseline reports written subsequently. The follow-up survey has not been conducted yet.

### 2. Country Experience

**Objective and stakeholders of dissemination workshop:** In September 2011, the Government of Rwanda held a three-day workshop on the health facility PBF and the CPBF programs. The goal of the workshop was to disseminate available results on both the health facility PBF and the CPBF programs, so as to foster policy dialogue among community level, district level and central level representatives. Ultimately, central level policy makers wanted to identify implementation issues and bottlenecks, and design solutions in collaboration with sub-national level representatives. Additionally, the Ministry of Health wanted to disseminate results from both the PBF and the CPBF programs in order to use the lessons learned from the first PBF program for the benefit of the implementation of the second CPBF program. Finally, the workshop fostered the participation of the students from the local Research partner (National School of Public Health): students presented results from the data analysis of health-related interventions in the country and received comments from the audience on their results and methodology.

**Endline results dissemination:** Results disseminated on the health facility PBF program were based on a publication of endline results on the impact of the program on child health outcomes in a peer reviewed journal (Basinga et al., Lancet 2011). The results showed a positive impact of the program on various child health outcomes, and helped supporting the advocacy of the Government for PBF, among local stakeholders, donors, and the general public with the presence of the press.

**Baseline results dissemination and feedback loop to central level:** The more recent and ongoing CPBF program was the main focus of the workshop. The first results presented on the program were based on the analysis of the baseline data collected within the IE. The team used the friendliest vehicles of results for the audience, such as simple descriptive statistics tables and mostly graphs. Participants in the workshop were invited to comment and question the results as often as possible. Group sessions were organized, where participants could use the results of the baseline (including tables of summary statistics on relevant topics) to reflect on a specific aspect of program implementation (e.g. user fees, monitoring and verification, etc.). They identified issues in the implementation that were reflected in the data, or on the contrary spotted discrepancies between the data and their own experience in the field, and came up with potential solutions to these issues to be designed and implemented throughout the course of the program. Participants then gave

feedback to the central level by presenting their analysis and proposed solutions to the audience.

### **3. Lessons Learned**

- The leadership of the Government in showcasing the results of the two PBF programs, both at baseline and at endline, helped acquiring buy-in from the general public, and mobilized the actors of PBF from the field as proactive contributors to adjustments to the program.
- The dissemination of health facility endline results was instrumental for the Ministry of Health in discussing with the Ministry of Finances to allocate funds to continue supporting the program.
- The mobilization of national media by the Ministry of Health during the restitution of the results from the health facility PBF intervention allowed influencing the international debate on the support of PBF in Africa and worldwide.
- The joint dissemination of results from the health facility and CPBF interventions was beneficial in that health facility endline results informed the second generation of PBF at the community level.
- In addition it facilitated capacity building for the local Research partner and for the Ministry of Health staff in secondary data analysis, student dissertation and different program level operational research.
- Baseline results made a significant contribution to discussions on what the main bottlenecks of the program were, how to improve it to ensure MCH targets are reached and what the next steps were to design and implement those improvements.
- The involvement of the actors of PBF on all levels (community, district, central levels) was a crucial element to the success of the workshop and the responsiveness of the actors on the ground to necessary adjustments.
- The workshop also provided an outlet for a feedback loop between central and sub-national levels, which was very much appreciated by participants in the workshop.
- Finally, the issues and propositions that emerged from the workshop regarding the CPBF intervention were discussed between the Government, Research partner and World Bank team in order to make sure the IE cycle and the implementation cycle matched, and that any adjustment needed on the IE side was made in accordance with the new developments or issues that arose on the implementation side.