



Research Findings: Integration of Postpartum Family Planning with Child Immunization Services in Rwanda

Key Study Findings

- The intervention increased contraceptive use over time. At baseline, contraceptive prevalence in the intervention sites was 49% and in the follow-up survey increased to 57%. In the control sites, prevalence at baseline was 58% and declined to 51% at follow-up. The 15 percentage point difference between the groups from pre- to post-intervention was statistically significant.
- Immunization services appeared not to have been affected by the intervention. Data on the use of the measles and other vaccines over a 16-month period indicated that immunization service visits did not decline in the intervention facilities once the intervention was implemented, and showed no difference in vaccination rates between the intervention and control groups.
- The delivery of the intervention, particularly the use of the FP screening tool during one-on-one encounters with mothers, required reinforcement, and some messages were not delivered consistently in all settings.

The Ministry of Health, with support from FHI 360, conducted a study evaluating the effectiveness of an intervention to reach postpartum women with family planning (FP) education, screening, and services through child immunization contacts.

The intervention successfully reached postpartum women during immunization visits and increased contraceptive use. Importantly, immunization service attendance was not affected by the introduction of family planning services during the immunization services. Based on these findings, participants at a national dissemination meeting recommended that the Ministry of Health scale up the intervention.

Background

During the extended postpartum period (12 months after birth), most women want to delay or avoid future pregnancies; however, many are not using a modern contraceptive method, a situation referred to as “unmet need” for family planning (FP).^{1,2} FP can help couples achieve healthy timing and spacing of pregnancies, which is particularly important because pregnancies that are spaced too closely together can pose serious health risks to both mother and child.

Although the use of FP services in the postpartum period is often low, the majority of women bring their infants for immunization services during the first year after birth. According to analysis of data from the 2010 Rwanda Demographic and Health Survey,³ 96% of infants received their the third dose of the diphtheria toxoid, tetanus toxoid, and pertussis vaccine (DTP3) by their first birthday, while only 30% of postpartum women reported using a modern FP method during the 12 months following their last delivery. The recommended infant vaccination schedule allows for

multiple health care contacts with infants and their mothers during the first year of life—providing several opportunities to reach postpartum women with FP information and services.

Intervention

The intervention was informed by the Health Belief Model (HBM).⁴ Intervention components were designed to increase perceived susceptibility to and severity of unplanned pregnancy among women with unmet FP need. The intervention was also intended to increase perceived benefits of FP and to reduce perceived barriers to FP use. Health providers delivered short messages to women attending routine infant immunization services during group education sessions, distributed educational brochures, and used a screening tool with all mothers to assess risk of an unplanned pregnancy, using criteria based on the Lactational Amenorrhea Method (LAM)⁵ (see Figure 1). The screening tool also instructed providers to give a brief counseling message depending upon a mother’s risk classification, including a referral for same-day FP services. Key intervention messages included information about healthy timing and spacing of pregnancies,

safe and effective FP methods for postpartum women including LAM, and return to fertility during the postpartum period. FP services were provided to women on the same day, at the same time (with minimal waiting), and in the same building as immunization services.

Study Design and Methods

The main objective of the study was to assess the effectiveness of the intervention to increase FP use among postpartum women. A second objective was to examine the relationships between HBM perceptions and contraceptive use to understand how the intervention led to observed changes in behavior. The HBM perceptions that were examined included:

- Perceived susceptibility to unplanned pregnancy
- Perceived severity of unplanned pregnancy
- Perceived benefits of FP
- Perceived barriers to receiving FP services

The study used a cluster randomized, two-group, separate sample, pre/post-test design in 14 randomly selected

health facilities (Figure 2) that were then randomly allocated to treatment or control groups. Over 800 women between 6 and 12 months postpartum were interviewed in both the baseline and follow-up waves of data collection, as well as an overall total of 118 providers. The study also included structured observations of immunization services and quarterly supervisory visits. The post-test data collection took place 16 months after the intervention was initiated.

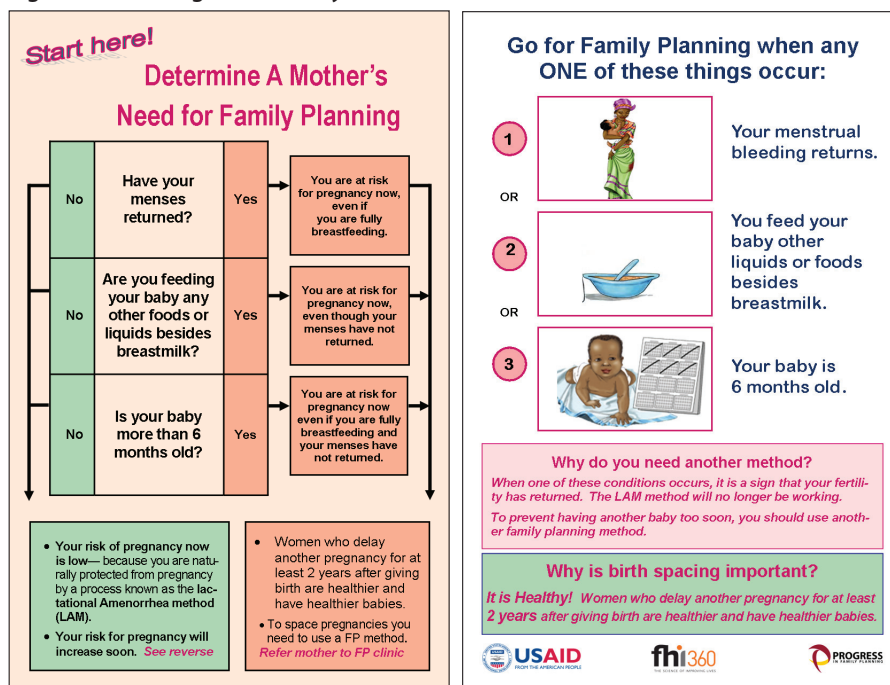
Findings

The key finding in the study related to changes in contraceptive use over time. At baseline, contraceptive prevalence in the intervention sites was 49% and increased to 57% prevalence at follow-up. In the control group, prevalence at baseline was 58% and declined to 51% at follow-up (Figure 3). The 8% increase in the intervention together with the 7% decrease in the control resulted in a 15 percentage points difference between the intervention and control groups when comparing baseline to follow-up results. This change was statistically significant ($p < 0.05$).

Also of note was that immunization services appeared not to have been affected by the intervention. Facility-level service data on the number of measles and other vaccines provided over a 16-month period were collected. Immunization service visits in the intervention facilities did not decline once the intervention was implemented, and there was no obvious difference between the intervention and control groups in terms of trends in immunization visits over the course of the study.

Concerning the health beliefs associated with FP method use at both baseline and follow-up, among all women in the study, women with higher perceived susceptibility to an unplanned pregnancy were more likely to use a method than those with lower perceived susceptibility (linear mixed model regression estimate was 0.24; $p = .05$). Women with greater

Figure 1: Screening Tool Used by Health Providers

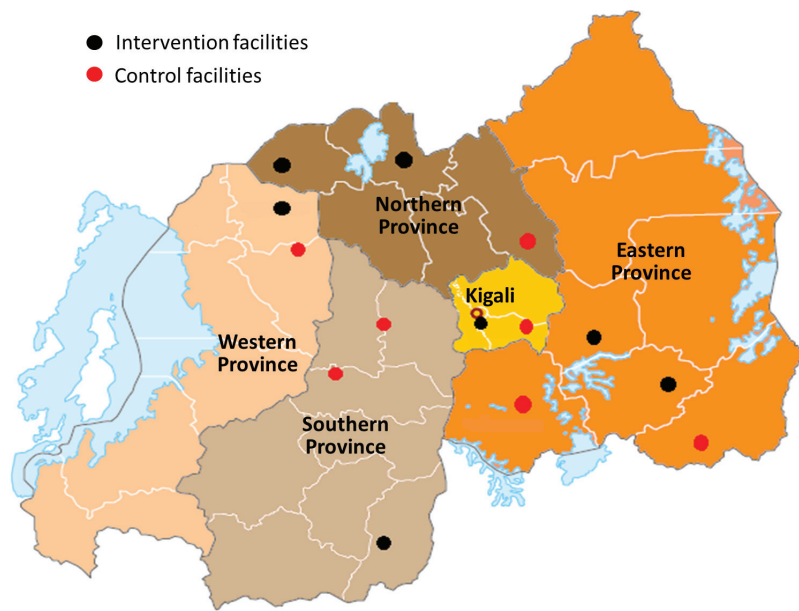


perceived severity of an unplanned pregnancy and greater perceived benefits of FP were also significantly more likely to use FP than women with lower perceived severity or perceived benefits, respectively. Those who had higher perceived barriers to FP services were less likely to use a method compared to those with lower perceived barriers, but this relationship was not statistically significant. There was a small but statistically significant change observed in perceived susceptibility to an unplanned pregnancy between the intervention and control groups from baseline to follow-up; however, there were no significant changes observed among any of the other HBM factors, likely due to the fact that perceptions were already very high at baseline in both groups.

The most common reason for non-use among both intervention and control groups was that women were waiting for return of menses (50% of non-users in the intervention group and 46% in the control); breastfeeding status was also cited as a reason by some (11% of non-users in the intervention group and 8% in the control). Because all women interviewed were more than 6 months postpartum, they were no longer protected by LAM; therefore, unless actively using a modern FP method, all women interviewed who were sexually active (93%) were at-risk of becoming pregnant, regardless of breastfeeding practices or whether or not menses had resumed.

Data on the incremental cost of the intervention were also collected. The resources required for all intervention activities—including developing and adapting materials, training providers, and providing supportive supervision—were identified. Costs of these activities, including labor and supplies, were then calculated and totaled for all phases of the intervention. The total incremental cost of the pilot intervention, less development costs that would not be required during a scale-up phase (such as staff time for developing training curricula and inter-

Figure 2: Map of Study Sites in Rwanda

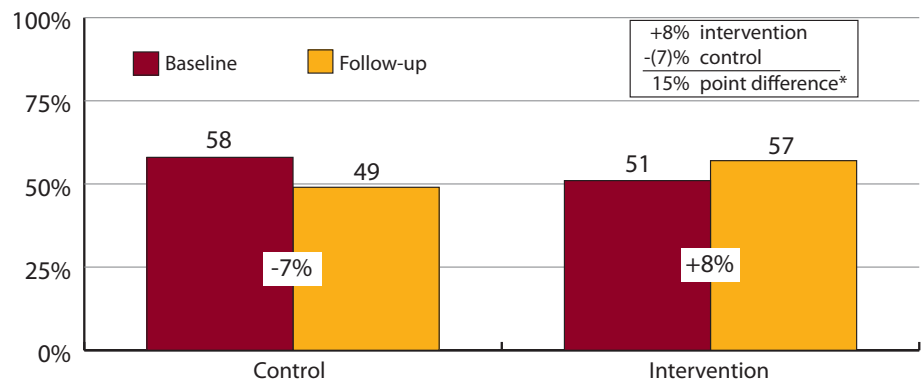


vention materials) equaled US\$24,203. The incremental cost per facility (N=7) was US\$3,457. The number of babies who received their measles vaccine (scheduled to be given at 9 months of age) between January 2011 and September 2011 was used as a proxy for the number of women who received the full 4-visit exposure to the intervention (N=5036 women).

Using these data, two calculations are important to note:

- Dividing the intervention cost of US\$24,203 by the 5036 proxy number of women reached shows the cost per full exposure was US\$4.81 in the first year. Because the study was a pre- and

Figure 3. Current Contraceptive Use by Group and Time



* Statistically significant at p=0.05; model is adjusted for age, parity, education, religion and partner approval of FP, and accounts for facility and temporal effects.

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post-test design, involving two groups of women, calculating the exact cost per new FP acceptor was not possible.

- To estimate the cost per new acceptor of a family planning method, the 15 percentage points difference in the intervention and control groups was used. Assuming that 15% of the 5036 proxy number of women reached would initiate FP use, there would be 755 new acceptors in the first year. Dividing US\$24,203 by 755 yields US\$32 as the total cost of the intervention per new FP acceptor.

These costs can be used to help inform decision-making when the Ministry of Health compares the costs and outputs of different health interventions and plans for scaling up.

Another study finding addressed issues related to the delivery of integrated services. During the intervention, district health managers with the research team observed and reported on how the intervention was being carried out. Components of the intervention, particularly the use of the screening tool during one-on-one encounters with mothers, required reinforcement by supervisors, and some messages were not delivered consistently in all settings. Provider attrition was a problem in some facilities, and providers who did not complete the training often did not deliver messages correctly. In addition, engaging both central-level and district-level Ministry of Health personnel in supervision visits and having buy-in from the Family Planning Technical Working Group were essential to successful implementation.

Next Steps

The finding that the intervention increased use of contraception among postpartum women provides important new evidence from a cluster randomized trial that this approach can be successful. Another particularly important finding was that adding FP to immunization services did not decrease uptake of immunization services. Both of these results indicate that the intervention may

be an effective way to decrease unmet need for FP among postpartum women.

In March 2013, the Ministry of Health, with support from FHI 360 and other partners, disseminated the results from this study at a national meeting entitled, "National Evidence Review & Scale-up Advisory Meeting on Postpartum Family Planning Programming." The participants recommended scaling up the intervention nationally, and initiated discussions regarding changes to service delivery guidelines, supervision requirements, training curricula, and data collection systems that will be required to support scale up. The recommendations went to the national Maternal and Child Health (MCH) Technical Working Group for incorporation into work plans of the Ministry of Health and partner organizations.

When scaling up, information from the supervisor's observations will be important to consider, including the findings that provider attrition was a factor and intervention implementation needed reinforcement over time. These factors point to the need for adequate and ongoing training, and supportive supervision. In the future, messages delivered to clients may also need to be adjusted to achieve a larger effect on perceived susceptibility to an unplanned pregnancy among postpartum women not using an FP method. In particular, messages should target the persistent misperception that women need to await the return of menses after giving birth to initiate an FP method.

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5. LAM is a modern family planning method that is 98% effective when three criteria are met: 1) the woman is fully or nearly fully breastfeeding her baby, 2) her menses have not returned, and 3) her baby is less than six months old.