

# Family Planning Information and Referrals at Child Immunization Clinics: Study in Ghana and Zambia Highlights Implementation Challenges

## Objective

To address the high unmet need for family planning (FP) among women during the extended postpartum period, research was completed in Ghana and Zambia to determine if integrating FP messages and referrals into early child immunization visits could increase contraceptive use among this group of women.

## Methods

Child immunization providers were trained to use a job aid designed to increase the quantity and quality of referrals made for FP services, which was ultimately expected to increase FP use in the postpartum period. A cluster randomized control study design was used to test this integrated approach. Data were collected through pre- and post-test surveys with female clients and through in-depth interviews with providers. The primary outcome of interest was use of a non-condom, modern FP method.

## Findings

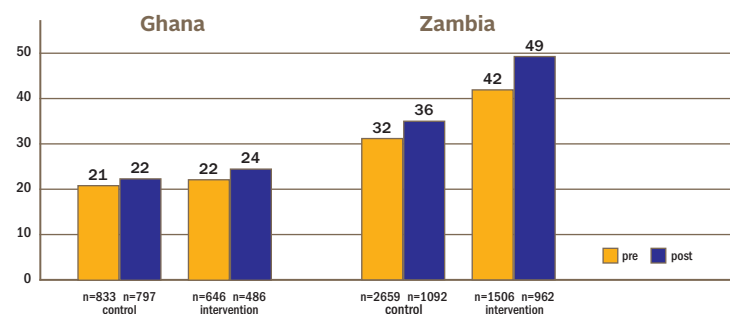
- The study assessed: a) client knowledge about Lactational Amenorrhea Method (LAM) and other types of guidance on risk of pregnancy, b) referrals for FP services, and c) levels of non-condom, modern FP method use. There were no positive results in the first two areas following the intervention. Small increases in contraceptive uptake in Zambia did occur in the intervention group, but this finding was not statistically significant.
- Immunization providers did not always use the job aid consistently and when they did, not in the manner prescribed in the study design (i.e., in one-to-one discussions).
- All 30 immunization providers interviewed felt that giving FP information to mothers was important and should be a part of their job.

## Conclusion

The intervention did not lead to a statistically significant contraceptive uptake. Immunization providers in both countries were positive about the intervention, but due to various challenges did not implement it as designed. Differences arose among providers about the best guidance to give women to help them identify pregnancy risk and whether to convey this information in groups or to individuals. More work is needed to understand the most effective messages to give to women (and potentially men) during immunization contacts and elsewhere during the postpartum period about FP and the risk of pregnancy. Challenges in implementing the intervention suggest that a different approach may be more appropriate and effective in the immunization clinic setting.

*From pre- to post-test, the percentage of woman using a non-condom, modern FP method increased more for clients in the intervention group, but this difference was not statistically significant in either country.*

**Figure 1. Percentage of Women Reporting Modern Contraceptive Method Use, Excluding Condoms**



## Background

During the extended postpartum period (12 months after birth), most women want to delay or avoid future pregnancies but are not using a modern contraceptive method, a situation referred to as “unmet need” for FP. Demographic and Health Surveys in 27 countries found that 67 percent of women who gave birth within the previous year had an unmet need for FP.<sup>1</sup> In addition, having another pregnancy too soon can pose serious health risks to both mother and child. Recent research indicates that 35 percent of deaths among children younger than age five in developing countries could have been avoided if births had been spaced at least 36 months apart.<sup>2</sup> Healthy timing and spacing of babies also results in lower maternal mortality.<sup>3</sup>

*“There is challenge to adding [family planning information and referral]. You, alone immunizing, telling the mother how to care for the child’s immunization site, explaining to her the type of vaccines you are giving for the child, and then, after that, adding this to it is very, very tiresome.”*

**–Ghana provider,  
in-depth interview**

A central factor behind the prevalence of postpartum unmet need is women’s awareness of when they are at risk for pregnancy. After giving birth, women cannot get pregnant for some period of time that varies depending upon certain factors. Many new mothers are not aware when they are at risk of pregnancy. Often, women (and providers) believe they cannot get pregnant unless their menses have returned, which is not true. Research has demonstrated that postpartum women are 98 percent protected against pregnancy if they meet three criteria: 1) less than six months postpartum, 2) exclusively or nearly exclusively breastfeeding, and 3) amenorrheic. This set of criteria was established as the basis for a contraceptive method linked with

breastfeeding, known as the lactational amenorrhea method or LAM. Once a woman no longer meets *all three* LAM criteria, she is at risk of pregnancy. Postpartum women need guidance on when they are at risk for pregnancy and encouragement to take advantage of available FP services.

While postpartum women often do not seek FP services, they do utilize child immunization services at high rates. Contacts with child immunization providers are an opportunity to reach mothers with information and/or services about FP. The recommended vaccination schedule for children allows for multiple health-care contacts with infants and their mothers during the first year of life – providing several opportunities to reach postpartum women.

This study in Ghana and Zambia sought to provide FP information and services in conjunction with child immunization programs, addressing two critical issues for postpartum women: the need for guidance on when they are at risk for pregnancy and the encouragement to take advantage of available FP services.

## Study Design, Population, and Methods

The research took place in the Central Region of Ghana and in the Chibombo and Kabwe districts of Central Province, Zambia. A cluster randomized, experimental research design was employed in 10 health facilities in each country. Selected facilities were randomized to either a control or intervention group. All sites included in the study were fixed, public sector health facilities that offered both immunization and FP at the same location. This ensured that women were able to easily act on FP information and referrals provided by the child health providers who delivered immunization services to their children. Prior to the intervention, child health providers were supposed to refer postpartum women to FP services. The goal of the intervention was to increase the quantity and quality of referrals made.

In the intervention tested, child health providers were asked to discuss FP and provide FP referrals to mothers bringing their children for immunization services at 0, 6, 10, and 14 weeks. To guide discussions, providers were trained to use a simple job aid, which was designed to help them:

- assess a woman’s risk for pregnancy based on LAM criteria,
- deliver a simple message about the benefits of healthy timing and spacing of pregnancies,
- prompt FP referrals when the woman was at risk of pregnancy, and
- teach women when their fertility will return.

Providers were oriented to the approach through training. The study coordinators made follow-up visits to troubleshoot any problems with use of the job aid and to monitor its use. An important part of the intervention plan was that pregnancy risk assessment and referral be delivered to women on an individual basis. Even though provider contact time with clients during immunization visits is often brief, researchers hypothesized that even a short individualized message would be better than a longer general message delivered to a group. Currently, much of the health information at child welfare clinics is delivered through group health talks. Group health talks often take place in noisy and chaotic settings, and many women may miss information in such a setting, especially if they are late for the sessions.

The study included a pre-test and post-test survey with women at the health facilities. Women were eligible to participate in these surveys if they had a child 9 to 12 months old, which corresponds to the recommended timing of the measles vaccine. This was a practical time to interview women in experimental clinics who, in the post-test phase, would have been exposed to the intervention during immunization visits in their child’s first six months of life. Trained research assistants screened the women for eligibility after they received services and asked to interview them if they were eligible. All study participants had informed consent statements read to them in their preferred language (English or a local language) and had to give their signed approval or thumb print before they were interviewed in a private location. Pre-test data were collected during early 2009 in Ghana (N=1480) and mid-2009 in Zambia (N=4165). Post-test data were collected in early 2010 in Ghana (N=1283) and the second quarter of 2010 in Zambia (N=2054).<sup>4</sup> See Table 1.

From the survey data, the study examined outcomes related to knowledge of LAM criteria, receipt of a referral to FP from an

**Table 1: Knowledge of Pregnancy Risk Factors in the Postpartum Period and Reported Referrals to Family Planning Services among Postpartum Women**

Knowledge and Referrals	Pre-Test (%)		Post-Test (%)	
	Control (N=833)	Test (N=647)	Control (N=801)	Test (N=482)
<b>Ghana</b>				
Spontaneously identified 3 LAM criteria	<1	<1	<1	<1
Knows can get pregnant before menses return	61	58	60	56
Knows can get pregnant while breastfeeding	53	54	68	47
Reported referrals to FP from immunization provider	35	35	44	34
<b>Zambia</b>				
Spontaneously identified 3 LAM criteria	<1	0	<1	<1
Knows can get pregnant before menses return	53	52	46	57
Knows can get pregnant while breastfeeding	74	80	76	74
Reported referrals to FP from immunization provider	32	26	26	33

immunization provider, and use of a FP method. The primary outcome of the research was use of a non-condom, modern FP method. This outcome was selected rather than use of any FP method for three reasons. First, condoms are used for HIV prevention as well as pregnancy prevention. Since the goal of the intervention was to increase use of FP methods for the purpose of pregnancy prevention, excluding condoms from the primary analysis helps isolate the effect of the intervention strategy. Second, condom use is highly effective at preventing pregnancy when used consistently, but consistent condom use is hard to measure and often over-reported. Also, modern FP methods are more reliable at preventing pregnancy than traditional methods.

The qualitative component involved in-depth interviews with immunization providers in the intervention groups. Fifteen providers from each country were asked about their experience using the job aid, suggestions for improvement, and their

reaction to integrating FP into immunization services.

In September 2010, the results from the quantitative and qualitative research were presented during meetings with in-country stakeholders, including immunization providers that participated in the intervention. The recommendations from these stakeholders are considered to be an important component of interpreting the research findings.

### Provider Behavior

In both countries, providers generally reported that they used the job aid with all of their clients. However, this is not reflected by any changes in knowledge on the part of postpartum women or in the number of referrals they reported receiving. Several factors may have contributed to this apparent inconsistency. In Zambia, in particular, the majority of providers reported that they used the job aid with women in their group health talks, not

one-on-one as intended by the intervention design. Since this information was presented to an audience and not on an individual basis, many women hearing the messages may not have perceived this as a referral (which would have affected self-reported data on referrals received) and may not have internalized the information enough to act on it – that is, to understand the risk of pregnancy and seek a FP method. Also, bias in providers reporting their own behavior may have contributed.

Most providers felt the job-aid was simple and straightforward to use. The majority felt their training was adequate, and they reported that their supervisors monitored their use of the job-aid. One important issue to note, however, was that some providers in Zambia felt that making referrals based on LAM criteria was inconsistent with their training; some reported that they had been trained to give a standard referral for FP to all women at the six week vaccination time point.

All 30 immunization providers felt that giving FP information to mothers was important and should be a part of their job. “They give birth to plenty of children, but they are not able to look after them,” said a Ghana provider. “So, when I see the women like that, I educate them and urge them to go for family planning and get what is best for them. When I get the opportunity to talk to such clients, I’m very happy.”

*While immunization providers were trained to discuss FP and provide FP referrals with each woman on an individual basis, in most cases providers were unable to provide individual counseling and instead used group talks to provide the information... These challenges in implementation highlight the need to design a more appropriate and effective approach for delivering this information in an immunization clinic setting.*

While immunization providers were trained to discuss FP and provide FP referrals with each woman on an individual basis, in most cases providers were unable to provide individual counseling and instead used group talks to provide the information. Providers cited time constraints, client load, under-staffing, and lack of a confidential space as the reasons for not providing one-on-one counseling. While some providers reported that they felt pressured because of the extra time needed to use the job aid, most felt that they had some time to give women the information and all felt it important to deliver the information to postpartum women. This feeling of having time could come from the fact that in Zambia, the providers used group talks to deliver messages. Also, some clinics in both countries had community health workers deliver the FP messages and referrals to save time for the immunization providers. These challenges in implementation highlight the need to design a more appropriate and effective approach for delivering this information in an immunization clinic setting.

### Changes in Women's Knowledge, Behavior

The surveys asked women to name the conditions that could put a woman at risk for pregnancy following a birth. In both countries, the women had very low knowledge of the LAM method at both pre- and post-test and in both the intervention and control groups. However, knowledge about factors related to the LAM criteria was higher. Knowledge about pregnancy risk before return of menses was much higher than knowledge of LAM criteria in both countries. This was also true regarding knowledge that a woman could get pregnant while breastfeeding. See Table 1.

The survey asked participants to report on whether or not they received a referral for FP from an immunization provider. At baseline, providers were referring about one of every three women in Ghana, with lower levels in Zambia. While the highest percentage of reported referrals was among the control group at post-test in Ghana, this could have occurred because of regular training updates given to immunization providers to refer. In Zambia, referrals increased in the intervention group from 26% to 33%.

The primary outcome of the research was reported use of a non-condom modern

contraceptive method. In Ghana, at pre-test, 21% of women in the control and 22% in the intervention group were users of non-condom, modern methods. At post-test, 22% and 24% were users of non-condom, modern methods in the control and intervention groups, respectively (see page 1). The increase in the intervention group was not statistically significant (OR = 1.05; p-value = 0.86). In Zambia, at pre-test 32% of women in the control and 42% of women in the intervention group were users of non-condom, modern methods. At post-test, this increased to 36% in the control group and to 49% in the intervention group (see page 1). Again, this change was not statistically significant, compared to the control group (OR = 1.2; p-value = 0.56).

The fact that contraceptive use did not increase at a statistically significant level was not a surprise, given the fact that women's knowledge of pregnancy risk and the referral levels – the two key steps in the intervention design – did not increase substantially.

### Next Steps

During post-study dissemination meetings, country participants expressed support for continuing to work to identify effective approaches for integrating FP information and referrals into immunization services. Although the intervention was not always implemented as designed and did not lead to a statistically significant increase in FP uptake among women at 9-12 months postpartum, stakeholders felt that the job aid and referral approach could be adapted to be more effective.

Stakeholders in Zambia felt that immunization providers should continue to give information about pregnancy risk in group sessions because individual counseling may not be practical. Hence, they recommended that the job aid be made into posters and suggested that brochures should be available so that women can take them home and discuss FP with their husbands. However, they felt that providers should also make individualized referrals to all women at their child's six-week vaccination visit rather than using LAM criteria to screen women for pregnancy risk.

In contrast, stakeholders in Ghana felt that using LAM criteria to guide referrals was straightforward. They also emphasized that different messages may need

to emphasized for first time mothers as opposed to women who already have had a child.

Stakeholders in both countries commented on the need to address the supervision and management systems at the facility level. One suggestion was to add a question to the under-5 year old intake card regarding whether mothers were screened for their FP needs and whether a referral was made. Another proposal was to consider revising the FP register to gather information on referrals from immunization services. Better documenting and reporting on aspects of integration would help create accountability within the system, stakeholders said.

### References

1. Ross JA, Winfrey WL. Contraceptive use, intention to use and unmet needs during the extended postpartum period. *Int Fam Plann Perspect* 2001;27(1):20-7.
2. Rutstein SO. Effects of preceding birth intervals on neonatal, infant and under-five years mortality and nutritional status in developing countries: evidence from the Demographic and Health Surveys. *Int J Gynaecol Obstet* 2005;89 Suppl 1:S7-S24.
3. Conde-Agudelo A, Rosas-Bermudez A, Kafury-Goeta AC. Effects of birth spacing on maternal health: a systematic review. *Am J Obstet Gynecol* 2007;196(4):297-308.
4. A nurses' strike during the data collection period reduced the post-survey number, but it met the research sample size requirement.

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