

LAM and the Transition Barrier Analysis Sylhet, Bangladesh

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EXECUTIVE SUMMARY

Background

The lactational amenorrhea method, or LAM, is a modern, reliable family planning method. Results from clinical trials have indicated that LAM is at least 98% effective in preventing pregnancy if the woman is: 1) fully or nearly fully breastfeeding, 2) in postpartum amenorrhea, and 3) less than six months postpartum. Research suggests that between 48% and 86% of LAM users transition to another modern family planning (FP) method; however, less is known about the barriers to transition and the factors that influence users' decision-making processes for the transition. Understanding the barriers to transition offers an important opportunity for improving the health of mothers and newborns by improving pregnancy spacing and reducing the risk of unplanned pregnancies during the first year postpartum.

The purpose of the “LAM and the Transition Barrier Analysis” was to gain further insight and explore the facilitators of and the barriers to the transition from LAM to other modern FP methods. The analysis was conducted within an operations research study, entitled the Healthy Fertility Study (HFS), which examined the integration of postpartum family planning services with community-based maternal and newborn health services. The HFS is a collaboration between ACCESS-FP, the Johns Hopkins School of Public Health, the Bangladesh Ministry of Health and Family Welfare, and Shimantik, a local Bangladeshi nongovernmental organization (NGO).

The HFS—which was nested within the Projahnmo III chlorhexidine trial—enrolled a subset of participants from the larger Projahnmo study area in the Sylhet District of Bangladesh and followed pregnant women in four intervention and control unions for a period of 12 months. As a part of the HFS intervention package, trained community health workers deliver counseling messages to women. Counseling on LAM, the transition to other modern methods, healthy spacing of pregnancies and the return to fertility are provided in household visits to women during their eighth month of pregnancy, and on day 6, day 29, and months 2–3 and 4–5 of the postpartum period.

Methods

This analysis interviewed 80 HFS mothers—40 “transitioners” and 40 “non-transitioners”—who had used LAM for at least three months and transitioned no earlier than three months postpartum. Husbands and mothers-in-law of 10 transitioners and 10 non-transitioners were recruited to triangulate data on social support. A mixed-method design was used for data collection: in-depth interviews were used to document the decision-making process around LAM use and the transition to other modern methods, and barrier analysis semi-structured questionnaires were used to identify key differences between transitioners and non-transitioners in specific behavioral determinants.

Results

Knowledge: Significantly more transitioners could recall the menses criteria for LAM than non-transitioners (100% and 90% respectively). When asked what they have learned about switching from LAM to another modern method, more transitioners made mention of the four aspects of LAM transition knowledge than non-transitioners: 1) knowledge to switch as soon as LAM ends

(50% and 15% respectively), 2) reference to one or more criteria as a cue to transition (15% and 12.5%), 3) specific knowledge of other modern methods (27.5% and 22.5%), and 4) knowledge of return to fertility (10% and 5%).

Decision-Making Process: Among the 40 transitioners interviewed: three (7.5%) were early transitioners, 19 (47.5%) were timely transitioners and 18 (45%) were delayed transitioners. Among early or timely transitioners, 15 women (83.3%) waited for menses to return before switching to another method. Only three of the 18 women (16.7%) who delayed the transition switched prior to the return of menses. Among all transitioners, 11 women (28%) switched to another method before menses returned.

Transition: Among the 20 LAM transitioners who participated in in-depth interviews, most switched to either condoms or combined oral contraceptives and some reported switching to injections. Thirty percent of women obtained the method at a pharmacy, followed by NGO sources (35%) and government sources (25%). Forty-five percent reported that their husband obtained the method. Participants cited various motivators to transition to other methods including: desire to delay/space (45%), fertility return (40%), desire to limit (30%), mother's health (25%), child's health (25%), ability to care for children (20%), financial reasons (10%), inability to breastfeed while pregnant (5%) and difficulty to work (5%).

Barriers: An analysis of barriers to the transition indicated that transitioners and non-transitioners differed on their perceptions of: the timing of their personal risk for pregnancy after a birth (13% versus 38%), vulnerability to pregnancy when each criterion changes (100% versus 83%; 90% versus 55%; 93% versus 53%), social support for the transition (95% versus 78%), and the advantages (68% versus 45%) and disadvantages of the transition (18% versus 38% and 83% versus 58%).

Compared to transitioners, non-transitioners were more likely to believe that they were only at risk for pregnancy one year or more after delivery (37.5% versus 12.5%). They were more likely to perceive side effects as a barrier and report that their husband and mother-in-law would not support the transition. Transitioners were more likely to believe that they could become pregnant if they did not switch to another method when menses returned (100% versus 83%), with introduction of other food (90% versus 55%) and when the baby is older than six months (93% versus 53%).

Conclusions

This analysis shows that perceptions around return to fertility, concerns about side effects, and perceived lack of social support from husbands and mothers-in-law for using a method are key barriers in users' timely transition from LAM to another modern FP method. There are multiple reasons why women wait for the return of menses prior to using a method; chief among these reasons was previous experience with return to fertility after a pregnancy. Interestingly, several women held the belief that the return of menses was necessary to obtain a method.

The resumption of menses was an important cue influencing LAM users' decisions about when to transition. Among non-transitioners that participated in interviews, nearly half reported that they were waiting for menses before initiating method use. Among transitioners, almost three-quarters

switched with the resumption of menses, which in many cases coincided with changes in other criteria. Among those who delayed, the primary reason was related to the return of menses.

All LAM transitioners moved to another modern method by nine months postpartum; more than half switched within the same month that the first criterion changed. The predominant motivational factors behind the transition were the desire to delay the next pregnancy, perception that fertility had returned and fear of becoming pregnant.

Recommendations

Results of this analysis will be used to modify counseling services, messages and interventions to strengthen support to LAM and the transition in the context of the HFS integrated FP/MNH community-based intervention package. Specifically, results suggest that additional messages are necessary to emphasize that return to fertility is not predictable and differs after each pregnancy and that decisions about when to switch should not be based on previous experiences with menses return and fertility. Secondly, additional counseling by community health workers is suggested between nine and 12 months postpartum to prevent a delay in the transition due to misconceptions about the timing of return to fertility. Lastly, the importance of husbands' and mothers-in-law' participation in community meetings should be underscored so that they may support women in the transition. Community meetings provide a forum for discussion and education around return to fertility after LAM, when LAM users should transition, side effects and how to support mothers in the transition. Addressing the barriers identified through this analysis will help to ensure that LAM use contributes to the healthiest spacing of pregnancies.

BACKGROUND

The Lactational Amenorrhea Method (LAM)

The lactational amenorrhea method, or LAM, is a modern, reliable family planning (FP) method—shown to be at least 98% effective in clinical trials.^{1,2} LAM can protect a woman from pregnancy as long as she meets the following three criteria:

- She is fully or nearly fully breastfeeding
- She is in postpartum amenorrhea
- She is less than six months postpartum

Women who choose LAM are encouraged to breastfeed their child as much as possible. (Most programs encourage women to introduce complementary foods at six months and to continue breastfeeding for 24 months.) When women no longer meet any of the above criteria, they are asked to return to a provider and to immediately start using another FP method.

LAM as a Gateway Method

An Interagency LAM Working Group, comprising LAM program managers and implementers, identified the importance of repositioning LAM as a gateway method to other FP methods. As such, the timely transition from LAM to other methods is encouraged and emphasized. Ideally, when a LAM user's fertility returns, she will have already chosen her next method, increasing the likelihood that she will begin using it promptly.

This proposed LAM transitional approach supports women's reproductive intentions and functions in a context of informed choice. Postpartum women are offered all appropriate FP methods; those who choose LAM are eligible to receive counseling that covers the specifics of using LAM, as well as healthy spacing of pregnancies, returning to fertility and determining which method to use after LAM. Follow-up visits also include discussion of her next method.³

Research on LAM Transition

Research has improved and expanded our knowledge about the efficacy and effectiveness of LAM,⁴ our comprehension of the characteristics of LAM users⁵ and our understanding of the factors that influence LAM use.⁶ With regard to transition, current research indicates that: between 48% and

¹ Perez A, Labbok M, and Queenan J. (1992). Clinical study of the Lactational Amenorrhea Method for Family Planning. *Lancet*, 339 (4): 968–970.

² Labbok M et al. (1997). "Multicenter study of the Lactational Amenorrhea Method (LAM) I. Efficacy, duration and implications for clinical application". *Contraception*, 55: 327–336.

³ LAM Interagency Working Group. Repositioning the Lactational Amenorrhea Method: Benefits for Women, Children and Programs. <http://www.pfp-toolkit.org/LAM/LAM.html>.

⁴ Labbok M et al. (1997); Peterson et al. (2000). Multicenter study of the Lactational Amenorrhea Method (LAM) III: Effectiveness, duration, and satisfaction with reduced client-provider contact. *Contraception*, 62 (5), 221–230.

⁵ Bongiovanni A et al. (2005). Promoting the Lactational Amenorrhea Method (LAM) in Jordan Increases Modern Contraceptive Use in the Extended Postpartum Period. The LINKAGES Project. Academy for Educational Development.

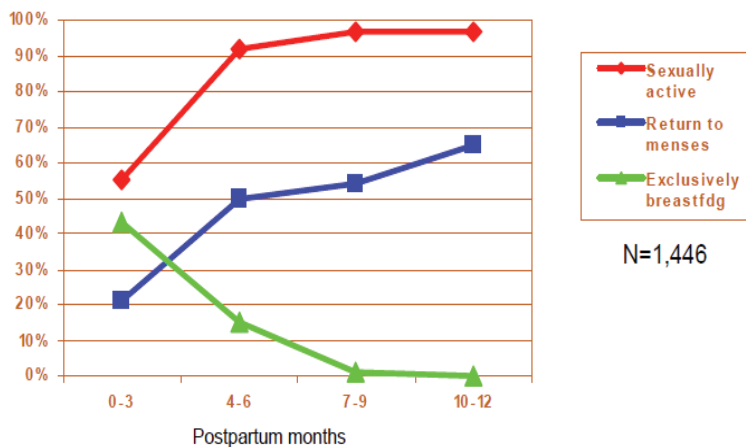
⁶ Lopez-Martinez et al. (2006). Acceptance for lactational amenorrhea for family planning after postpartum counseling. *The European Journal of Contraception and Reproductive Health Care*, 11(4), 297–301.

86% of LAM users transition to another modern method;⁷ LAM users are more likely to transition to a modern method at 12 months postpartum than women who use breastfeeding for FP without knowing LAM criteria and women who use traditional methods;⁸ and delays in transition are often attributed to waiting for menses to return.⁹ Less is known, however, about facilitators of and barriers to the transition from LAM to other modern FP methods.

LAM Transition in Sylhet, Bangladesh

In Sylhet, Bangladesh, understanding the barriers to the LAM transition offers an important opportunity for improving the health of mothers and newborns by improving pregnancy spacing and reducing the risk of unplanned pregnancies during the first year postpartum. In Sylhet, 26.1% of births occur within short birth intervals of less than 24 months, as compared to 15.1% in the rest of Bangladesh.¹⁰ In addition, the period of the LAM transition coincides with the timeframe that many women are—often unknowingly—at risk for pregnancy. Demographic Health Survey (DHS) data for Bangladesh indicate sharp declines in exclusive breastfeeding and increases in sexual activity during the three- to six-month postpartum period. In the first three months postpartum, more than 50% of women resume sexual activity; this percentage increases steadily through the first year, totaling about 97% of women at 12 months postpartum. And approximately 50% of women experience a return of menses within six months (Figure 1).

Figure 1: Return to Fertility³



Sylhet has similar patterns: the median duration of postpartum abstinence and exclusive breastfeeding is 2.3 months postpartum and the median duration of postpartum amenorrhea is 8.9 months.¹¹ The combination of these factors increases women’s risk for short birth intervals and unplanned pregnancy during the first year postpartum. To address these risks in Sylhet, ACCESS-FP, the Johns Hopkins School of Public

Health (JHSPH), the Bangladesh Ministry of Health and Family Welfare (MOHFW) and Shimantik, a local Bangladeshi non-governmental organization (NGO), are collaborating on an operations research study, namely the Healthy Fertility Study (HFS). This HFS is systematically examining the integration of postpartum family planning (PPFP) interventions with community-based maternal newborn health (MNH) services. To raise awareness of LAM as a PPFP method, it

⁷ Bongiovanni A et al. (2005); Hight-Laukaran et al (1997.) Multicenter study of the Lactational Amenorrhea Method (LAM): II. Acceptability, utility, and policy implications. *Contraception*, 55(6), 337–346; Khan et al (2008.) Promoting healthy timing and spacing of births in India through a community-based approach. Frontiers Program. Washington, D.C.; Population Council; Labbok et al (1997); Peterson et al (2000).

⁸ Bongiovanni A et al. (2005).

⁹ Bongiovanni A et al. (2005); Khan et al. (2008).

¹⁰ 2007 Bangladesh Demographic Health Survey.

¹¹ 2007 Bangladesh Demographic Health Survey.

was included in the package of interventions that the HFS examined. Specifically, the intervention package included LAM and transition counseling during household visits by community health workers (CHWs) during the eighth month of pregnancy, on days 6 and 29, and during 2–3 and 4–5 months postpartum. Results of this HFS research will ultimately be used to inform MNH programs, particularly in South Asia, on how to integrate FP services within existing programs.

LAM and Community Mobilization

Community mobilizers (CMs) conducted community meetings to raise awareness about LAM and the transition among husbands, mothers-in-law, and other influential family and community members. LAM role models were also established in the community to improve LAM use and visibility. Findings from this barrier analysis will be used to modify counseling, messages and interventions to better support LAM and the transition in the context of integrated PFP/MNH community-based services.

METHODS

Study Design

The HFS—which was nested within the Projahnmo III chlorhexidine trial¹²—enrolled a subset of participants from the larger Projahnmo study area. The study followed pregnant women in two intervention and control unions¹³ for a period of 36 months in the Sylhet District of Bangladesh. Data are being collected longitudinally from pregnancy to one year after delivery at four points in time (i.e., pregnancy, three months, six months and 12 months postpartum).

For this analysis, HFS participants who had used LAM were interviewed to explore the barriers to the LAM transition and the factors that influence LAM users’ decisions to transition or not. A mixed-method design was used for data collection, including in-depth interviews and semi-structured questionnaires.¹⁴ In-depth interview questions were used to document the decision-making process around LAM use and the transition to other modern methods. Data from the semi-structured interviews were used to identify key differences between “transitioners” and “non-transitioners” in specific behavioral determinants of the transition from LAM to other methods. The nine determinants examined included:

- Perceived susceptibility to pregnancy
- Perceived severity of closely spaced births
- Perceived efficacy of timely transition for spacing/prevention of unintended pregnancy
- Perceived social acceptability of the transition
- Perceived self-efficacy (LAM use and the transition)

¹² A trial designed to test two different regimes of umbilical cord cleansing. See Healthy Fertility Study Baseline Report for a more detailed description.

¹³ The smallest local government bodies in Bangladesh with an average population of about 20,000.

¹⁴ Adapted from Davis, TP. (2004) Barrier Analysis Facilitator’s Guide: A Tool for Improving Behavior Change Communication in Child Survival and Community Development Programs, Washington, D.C.: Food for the Hungry. <http://barrieranalysis.fhi.net>.

- Cues to transition
- Perception of divine will
- Positive attributes of the transition
- Negative attributes of the transition

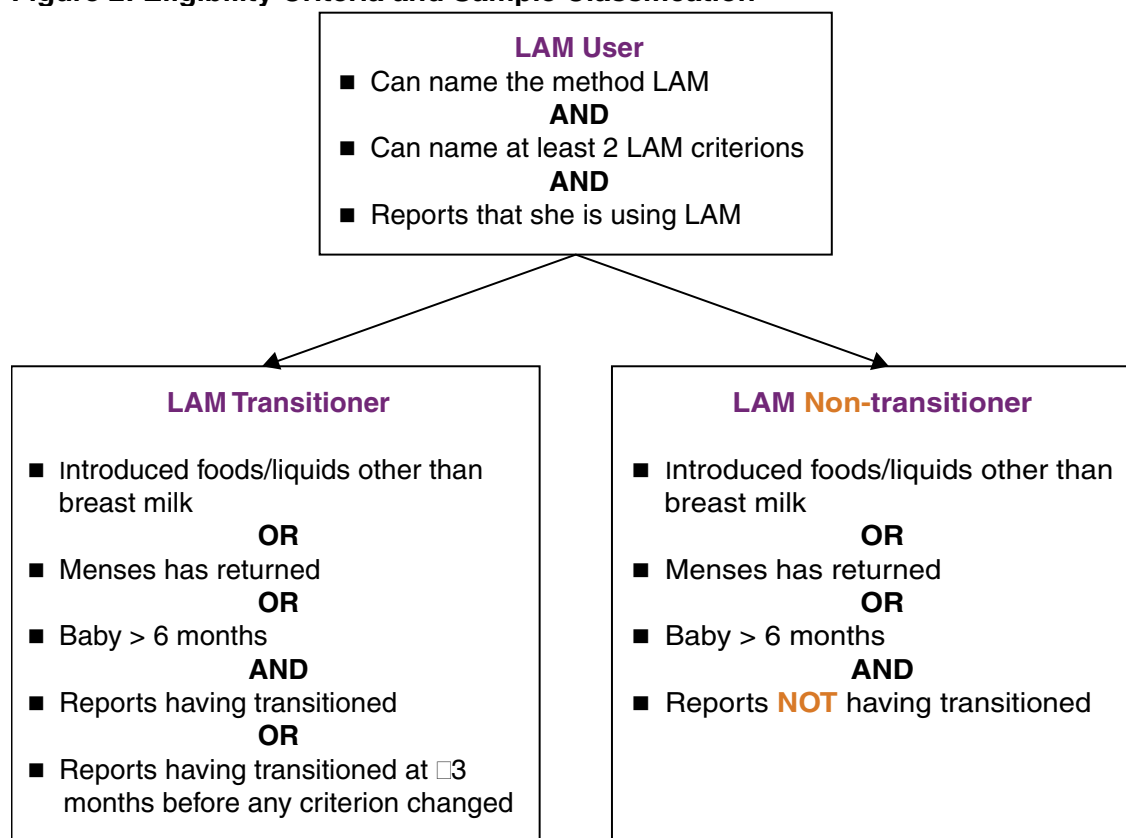
Participant Eligibility

All study participants had used LAM for at least three months and transitioned no earlier than three months postpartum. A LAM user was defined as a woman who: could name the method of LAM, had been counseled on LAM, remembered at least two LAM criteria¹⁵ and reported using LAM. Also, during screening, interviewers asked women to identify when each criterion changed to cross-check reported LAM use with actual LAM use. Non-LAM users were defined as women who used LAM less than three months postpartum; these women were not eligible to participate in the study.

Definitions

A LAM “transitioner” was defined as a woman who switched to another method after any one of the three criteria changed, and no earlier than three months postpartum. “Non-transitioners” were defined as women who did not switch to another modern method after any one of the three LAM criteria changed (**Figure 2**).

Figure 2: Eligibility Criteria and Sample Classification



¹⁵ LAM users have been measured in several ways (see <http://www.linkagesproject.org/LAMCD/MEindicators.htm> for details). In this study, LAM users were women who reported using LAM and had received counseling. Only LAM users who could remember at least two criteria were included for analysis purposes.

Recruiting and Sampling Strategy

The initial project sites of the HFS were in two unions (Manikpur and Kajalshar) and 12 clusters¹⁶ (seven clusters in Manikpur and five clusters in Kajalshar). Project clusters included both peri-urban (Manikpur) and rural sites. The purposive sampling strategy implemented was designed to recruit LAM transitioners and non-transitioners from all program areas to ensure that the full range of barriers was captured. Participants were stratified by high and low parity, as previous feedback during a program review indicated that issues may differ between these two groups.

Approximately 80 women who had used LAM were identified, based on a list generated by the community health worker (CHW) routine LAM screening and referral forms. CMs conducted a verbal pre-screening of these 80 women to identify transitioners and non-transitioners. At least three transitioners and three non-transitioners were identified in each cluster. Whenever possible, transitioners and non-transitioners were recruited from the same village in a cluster; the assumption was that this would improve comparability of contextual/environmental factors (e.g., service availability, economic, education, social, cultural). If a transitioner and a non-transitioner were not available in the same village, one was recruited from a similar neighboring village.

Husbands and mothers-in-law of 10 transitioners (five high-parity, five low-parity) and 10 non-transitioners (five high-parity, five low-parity) were recruited to triangulate data on social support. Whenever possible, husbands and mothers-in-law of the same postpartum woman were interviewed for complete triangulation of data.

Prior to data collection, CMs generated a complete list of participants. This list included transitioners, non-transitioners, identification numbers, women's names, husbands' names, *bari*¹⁷ names and *bari* locations (used by the interviewer to locate interviewees).

Sample Size

Eighty mothers participated in the study, 40 transitioners and 40 non-transitioners. All 80 mothers participated in this barrier analysis interviews using semi-structured questionnaires. Sample size was estimated based on the sample size needed to detect a difference between those who transition and those who do not on key behavioral determinants of the LAM transition at a significance level of $p < .05$, based on similar study designs.

Among the 80 mothers who participated, the first 20 transitioners and 20 non-transitioners identified were purposively selected to have an equal number of high- and low-parity mothers. In addition to responding to barrier analysis questionnaires, these first 40 mothers participated in in-depth interviews about the process of deciding whether to transition to another method. The sample size for the in-depth interviews was estimated to be adequate to reach informational saturation and gain additional insights on the decision-making process and barriers to transition, taking into

¹⁶ A cluster is an administrative division determined by the project to delineate CHWs catchment area.

¹⁷ A bari is a cluster of houses usually around the common yard accommodating families whose heads are related by blood or affinal connections." Caldwell, JC, Immerwahr, G, Ruzicka, LT. (1982) Illustrative analysis: family structure and fertility. *World Fertility Survey Scientific Reports*, No. 39, p. 36 in Foster, A. (1993) Household Partition in Rural Bangladesh, *Population Studies*, 47(1), 97-114.

account potential differences between high- and low-parity mothers. The first 10 husbands and mothers-in-law of high- and low-parity transitioners and non-transitioners were also interviewed based on their availability (Figure 3).

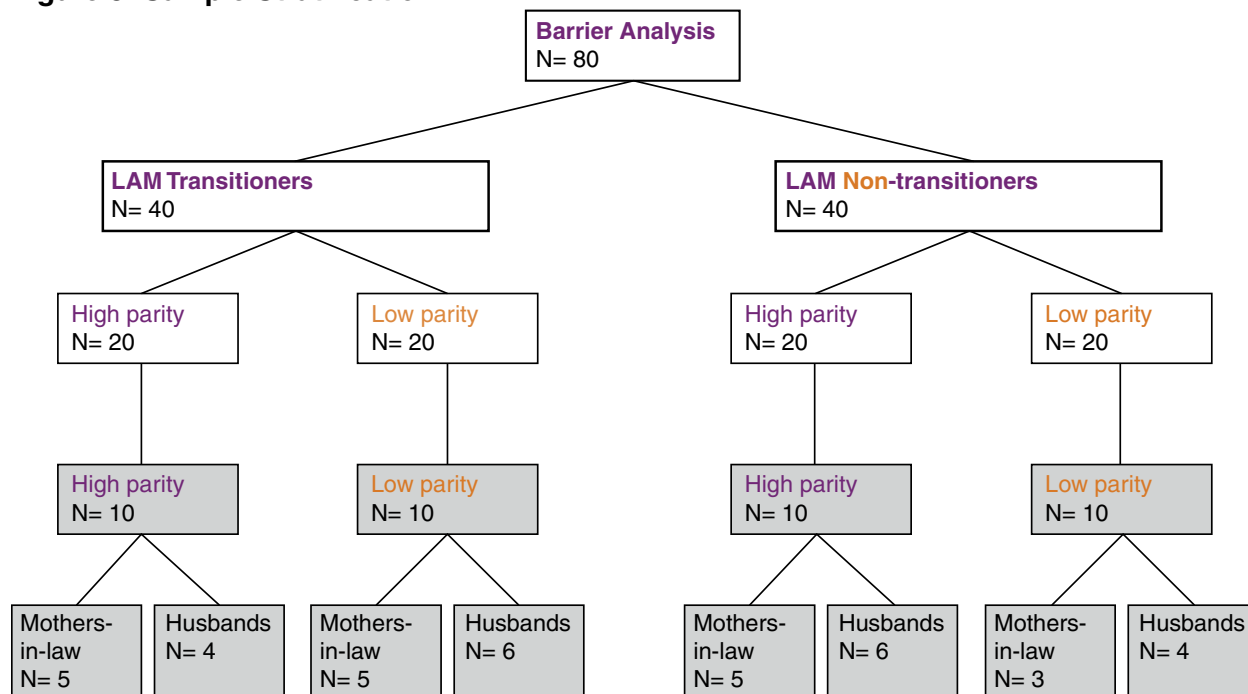
Data Collection

Interviews were conducted by the HFS field supervisor, two program officers and two consultants. The interview process combined techniques from both in-depth interviewing and interviewing using more structured questionnaires. All respondents were screened to determine LAM transition status. And all who were eligible answered socio-demographic questions. Half of the respondents (20 transitioners and 20 non-transitioners) were first asked open-ended questions around breastfeeding, LAM use and the transition. These questions were followed by semi-structured questionnaires related to nine behavioral determinants of the LAM transition. The other half of respondents completed screening, socio-demographic and barrier analysis portions of the interviews only.

The objectives of this approach were to build rapport with interviewees; facilitate the natural thought processes related to respondents’ decisions around LAM use and the transition of the respondents; aid event recall; expose and resolve gaps and inconsistencies in responses; and gather contextual information that would aid the interpretation of findings.¹⁸

The entire questionnaire (interview guides and barriers analysis questionnaire) was pretested and pilot-tested with the team prior to data collection to ensure: clarity of language, accuracy of translations, logical sequence of questions, that questions elicited the types of information needed for the analysis, and that all team members understood each question and associated probes.

Figure 3: Sample Stratification



¹⁸ Yount, K, and Gittleson, J. (2008) Comparing Reports of Health-Seeking Behavior from the Integrated Illness History and a Standard Child Morbidity Survey. *Journal of Mixed Methods Research*. 2(1), 23–62.

DATA ANALYSIS

Comparison of Transitioners and Non-transitioners

Sample sizes were small and not designed to detect a difference between LAM transitioners and non-transitioners on variables that may be associated with the LAM transition. However, a two-tailed student's t-test assuming equal sample variance (homoscedastic) was used to compare transitioners and non-transitioners on socio-demographic characteristics including: age, number of pregnancies, number of living children, desire for more children, desired number of months for birth spacing, level of education, religion, work and economic status, as well as LAM and transition knowledge, and transition timing. The economic status was derived by developing an index score using selected questions from the DHS on housing structure, electricity, water source, land ownership and toilet facilities. Responses were ranked, and an average score was developed for each participant. Scores ranged from 8 (reflecting lower socio-economic status) to 24 (highest).

LAM and Transition Narrative Histories

Very brief LAM and transition narrative histories were developed from the first 20 transitioner and 20 non-transitioner interviews. These histories helped to better understand the decision-making process around LAM use, the decision to end LAM use and the transition to other modern FP methods. Data from this part of the interview were used to identify critical junctures in the transition decision-making process, to develop descriptive profiles of transitioners and non-transitioners and to identify barriers. Interviews of husbands and mothers-in-law of transitioners and non-transitioners were triangulated with data from transitioners and non-transitioners to further explore the role of social support for the transition.

Barrier Analysis

To identify differences between transitioners and non-transitioners on each behavioral determinant of the LAM transition, odds ratios and the corresponding uncorrected p-values were calculated.

Limitations in the Study Design

At the time of the study, little data on when LAM users switch to other FP methods existed. Consequently, all LAM users who had transitioned at the time of the study were counted as transitioners, regardless of when they had transitioned. LAM users who had not yet transitioned at the time of the study were defined as non-transitioners. Findings suggest, however, that there may be some overlap between the two groups (e.g., some women who were defined as non-transitioners at the time of the study, but were actually delaying their transition until menses resumed. This behavior was similar to some transitioners who delayed the transition).

This barrier analysis used a case control design, so further research is needed to determine the relationship between exogenous indicators (e.g., SES and education) and the LAM transition. In addition, findings from this analysis may not be generalized to other country settings, as many determinants are context-specific. Studies in two other countries, Guinea and Uganda, are being conducted to compare findings.

RESULTS AND FINDINGS

Characteristics of LAM Transitioners and Non-transitioners

There were no significant differences between transitioners and non-transitioners in average age, number of pregnancies, number of living children, number of male or female children, or religion (**Table 1**). There were statistically significant differences between transitioners and non-transitioners in average completed years of school and desire for more children. While not statistically significant, transitioners had a slightly higher socio-economic status and tended not to work outside the home.

Table 1: Characteristics of Transitioners and Non-Transitioners

CHARACTERISTICS	TRANSITIONERS (n= 40)	NON- TRANSITIONERS (n=40)	p-VALUE
Age	25.2	26.0	0.509
Number of pregnancies	3.4	3.2	0.635
Number of living children	2.9	2.7	0.536
Number of male children	1	1	0.835
Number of female children	2	1	0.373
Desire more children (n=38):**			
• Yes	47.5%	52.5%	0.000
• No	47.5%	42.5%	0.000
Number of months after previous birth	42.9	38.4	0.388
Number of yrs of school completed**	5.7	3.1	0.000
Religion:			
• Muslim	77.5%	62.5%	0.147
• Hindu	22.5%	37.5%	0.147
Working outside of the home	10.0%	22.5%	0.133
Average Economic Index Score* (Range: 8–24)	13.3	12.6	0.085
*p-value less than 0.1; **p-value less than 0.05			

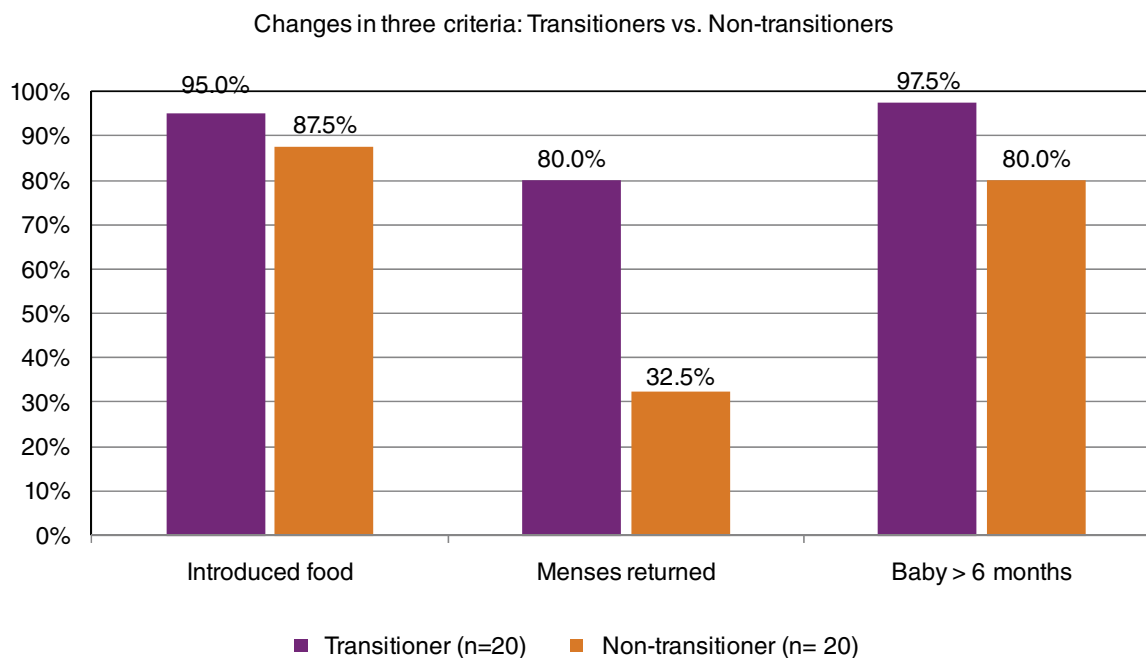
Among transitioners and non-transitioners, there was no statistically significant difference between the average postpartum month at the time of data collection and the duration of actual LAM use. Actual duration of LAM use was determined based on the postpartum month when the first criterion changed. On average, transitioners and non-transitioners were nine months postpartum at the time of the study. LAM use ended at about six months postpartum for transitioners and five months postpartum for non-transitioners. However, at the time of the study, significantly more transitioners had resumed menses and had babies older than six months (**Table 2** and **Figure 4**). On average, transitioners reported switching to another modern FP method at six months postpartum.

Table 2: Period Postpartum, Duration of LAM Use and Timing of Transition

CHARACTERISTICS	TRANSITIONERS (n=40)	NON-TRANSITIONERS (n=40)	p-VALUE
Average postpartum month at time of data collection	9.5	9.4	0.938
Average PP month when LAM ended	5.70	5.48	0.264
Average PP month of reported transition	6.20	N/A	
Criteria changed: Introduced foods Average PP month	95.0% 6.6	87.5% 6.6	0.241
Menses returned** Average PP month	80.0% 6.7	32.5% 6.8	0.000
Baby > 6 months**	97.5%	80.0%	0.013

*p-value less than 0.1; **p-value less than 0.05

Figure 4: Comparisons of Criteria Changes by Transition Status



KNOWLEDGE OF LAM AND THE TRANSITION TO OTHER MODERN METHODS

LAM Knowledge

LAM transitioners and non-transitioners were similar in their knowledge of the name LAM and their recall of the breastfeeding criterion. However, significantly more transitioners could recall the menses criterion. “Baby less than six months” was the criterion most frequently forgotten by both transitioners and non-transitioners. While not statistically significant, more transitioners could recall “baby less than six months” than non-transitioners, and more transitioners could name all three criteria (Table 3). All responses were based on unprompted recall.

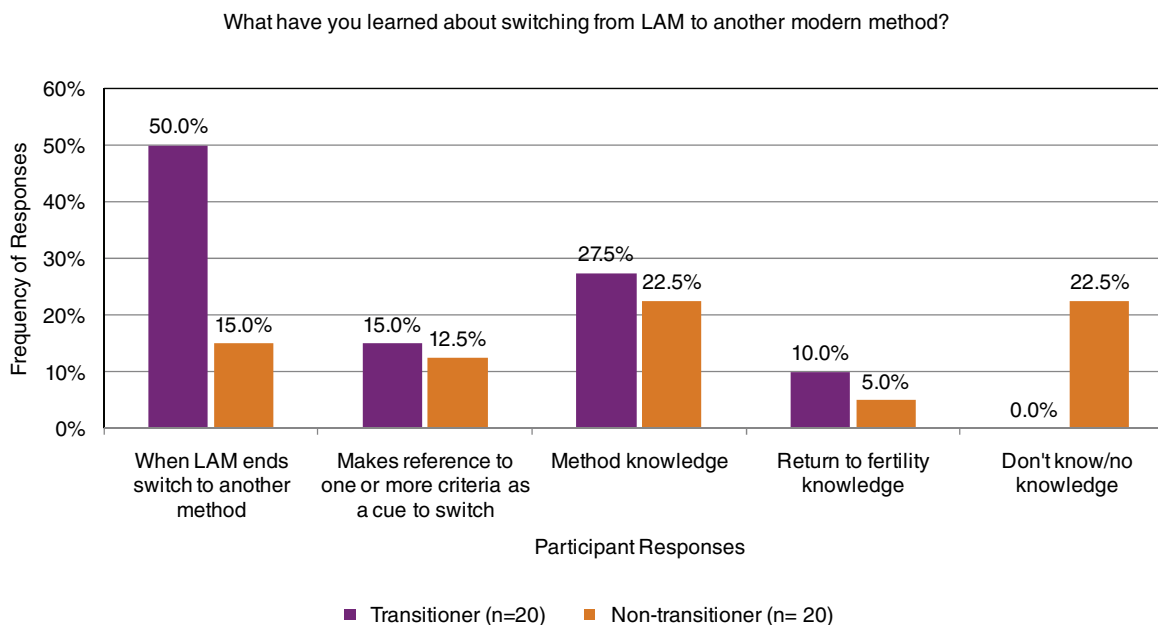
Table 3: Unprompted Recall of LAM Criteria by Transition Status

CHARACTERISTICS	TRANSITIONERS (n=40)	NON- TRANSITIONERS (n=40)	p-VALUE
Know name LAM	100.0%	100.0%	
Knowledge of the three criteria:			
Breastfeed only	100.0%	100.0%	
No Menses**	100.0%	90.0%	0.041
Baby < 6 months	55.0%	40.0%	0.184
Know up to 2 criteria*	47.5%	67.5%	0.072
Know 3 criteria*	52.5%	32.5%	0.072
*p-value less than 0.1 **p-value less than 0.05			

LAM Transition Knowledge

To gain a more in-depth understanding of LAM users’ knowledge about the transition, during in-depth interviews, 20 transitioners and 20 non-transitioners were asked to respond to an open-ended question: “What have you learned about switching from LAM to another modern method?” After coding their responses, four aspects of LAM transition knowledge were identified: 1) knowledge to switch as soon as LAM ends; 2) reference to one or more criteria as a cue to transition; 3) specific knowledge of other modern methods; and 4) knowledge of return to fertility. Coding of all 40 responses indicated that more transitioners made mention of each of these aspects of the transition. In addition, several non-transitioners responded that they did not know about transition (Figure 5), as compared to none of the transitioners.

Figure 5: Knowledge about Transition by Transition Status



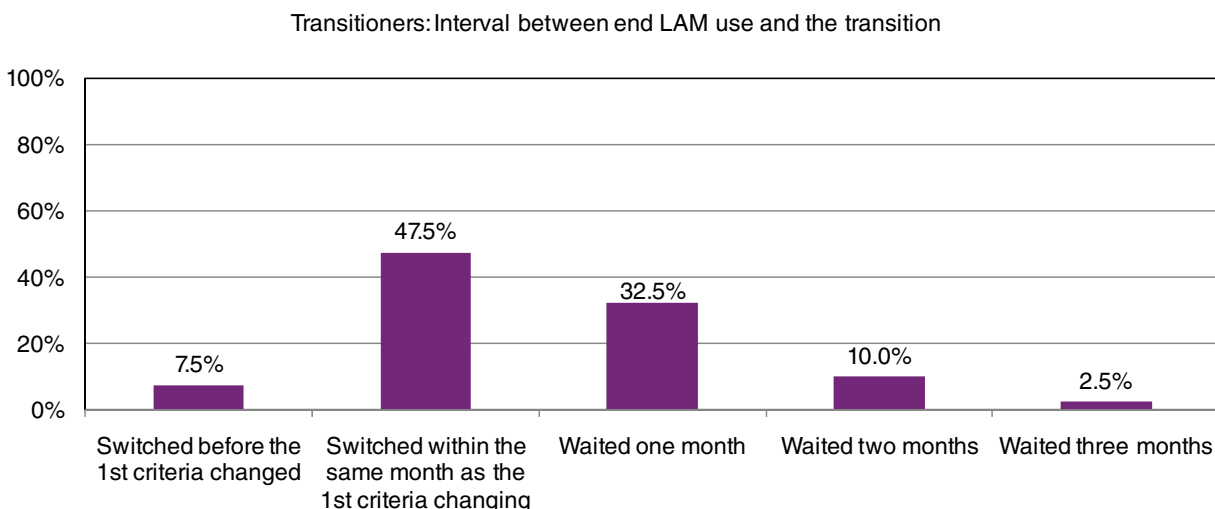
LAM Transition Decision-Making Process: Timing and Cues

The decision-making points for transitioning from LAM to another modern FP method were explored in relation to both the timing of the transition and the criteria that cued LAM users to transition.

Timing of the Transition

The timing of the transition was analyzed by graphing the interval between “the actual end of LAM use” and the reported month of transition (**Figure 6**). The “actual end of LAM use” was calculated based on the reported postpartum month that the first LAM criterion changed. The reported month of the transition reflected the month that the interviewee reported switching to another method. Among the 40 transitioners interviewed three (7.5%) were **early transitioners**, switching before any criteria changed. Another 19 were **timely transitioners**, defined as switching within the same postpartum month as when the first criterion changed. The remaining LAM users were **delayed transitioners**, defined as waiting one or more months after the first criterion changed before switching to another method. Thirteen of the 40 transitioners (32.5%) waited one month after the first criterion changed to switch to another modern method. The remaining five (12.5%) waited two months or more. Thus, a total of 55% were early or timely transitioners and the remaining 45% were delayed transitioners.

Figure 6: Interval between the End of LAM Use and Reported Transition



Criteria That Cued LAM Users to Transition

To understand which criterion LAM users tended to use as a cue to transition, an analysis was conducted to examine: 1) the postpartum month when women reported switching to another modern FP method, and 2) which criterion had changed at the time of the reported transition. (See **Annex II** for detailed analysis and chart.) Among early or timely transitioners, only eight (36.4%) transitioned before menses returned. Among the 18 delayed transitioners, 15 (83.3%) waited for menses return before switching to another method. Only three of the 18 who delayed the transition, switched prior to the return of menses. Among all transitioners, only 28% switched to another method before menses resumed (**Table 4**).

Table 4: Cues to Transition Based on Changes in Criteria

CUES TO TRANSITION	PERCENTAGE (n=40)
Early transitioners (3 out of 40): 3 transitioned before any criteria changed	13.6%
Among timely transitioners (19 out of 40): 8 transitioned when all 3 criteria changed simultaneously	36.4%
6 transitioned when only 1 criterion changed	27.3%
<ul style="list-style-type: none"> • Menses (n=4) • Introduced food (n =1) • Baby > 6 months (n=1) 	
5 transitioned when 2 criteria changed simultaneously	22.7%
<ul style="list-style-type: none"> • Introduced foods at 6 months without menses (n=3) • Baby >6 months with menses (n=2) 	
8 of the 22 early and timely transitioners switched before resumption of menses	36.4%

CUES TO TRANSITION	PERCENTAGE (n=40)
Among delayed transitioners (18 out of 40):	
Waited for menses before switching to another method, although all had babies older than 6 months, and 9 had already introduced foods (n=15).	83.3%
Switched before the resumption of menses (n=3)	16.7%
Among all transitioners, only 11 out of 40 transitioned before menses resumed.	28%

DESCRIPTION OF TRANSITIONERS

Method Use after LAM

Among the LAM transitioners who participated in in-depth interviews (n=20), most switched to either condoms or combined oral contraceptives (COCs). And some reported switching to injections. At the time of the in-depth interviews, almost all LAM transitioners were still using the same method that they first chose after LAM. The one exception was a mother who was concerned about the effect of COCs on her breast milk; she used condoms first then switched to COCs at nine months postpartum. About one-third reported obtaining methods at a pharmacy, followed by NGO sources and government sources. Most often women reported that their husbands retrieved methods for them, but at least one-third reported obtaining methods on their own (Table 5).

Table 5: Transitioners' Use of FP after LAM

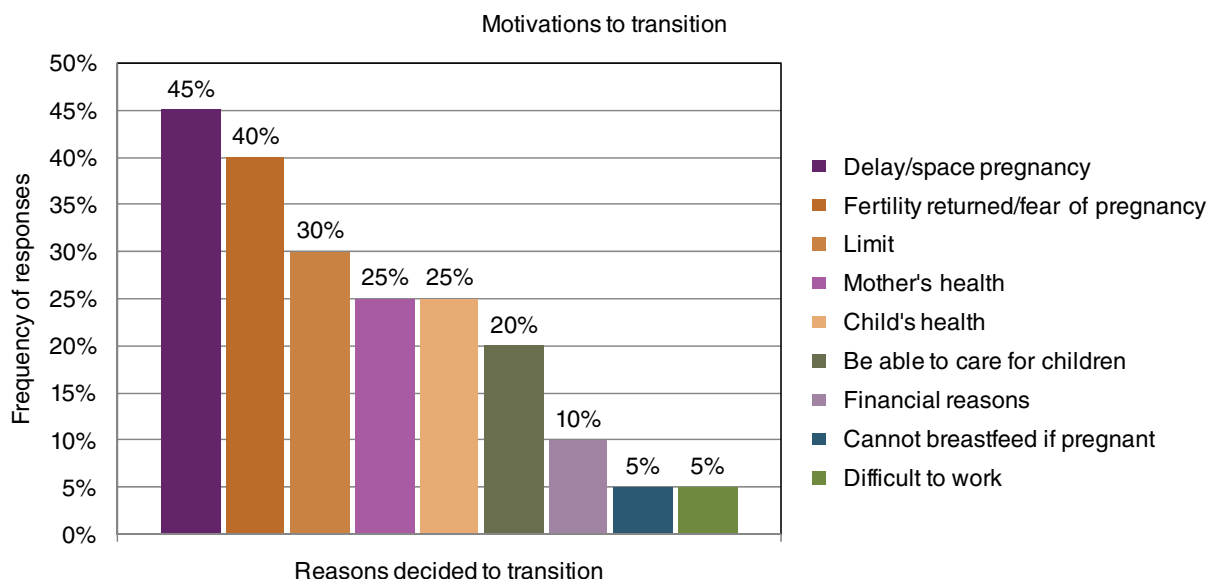
WHICH METHOD USED AFTER LAM	% LAM TRANSITIONERS (n=20)
Condom	40%
Pill (COC)	40%
Injection	20%
Still using the same method	
Yes	95%
No*	5%
*switched because concerns about COCs affect on breast milk	
Where obtained method	
Pharmacy	30%
SSFP (Shimantik Smiling Sun Franchise Project–NGO)	20%
BWHC (Bangladesh Women's Health Coalition–NGO)	15%
FWC (Family Welfare Center - government)	10%
Government hospital	10%
Village doctor	5%
Female health worker	5%
Don't know	5%

WHICH METHOD USED AFTER LAM	% LAM TRANSITIONERS (n=20)
Who obtained method	
Husband (condom, pills)	45%
Woman herself	30%
Couple together (pills, injections)	10%
Woman with mother-in-law (injection)	5%
Health worker	5%
Older child (pills)	5%
Average cost of methods	39.375 taka ¹⁹

Motivation to Transition from LAM to Other Modern Methods

During in-depth interviews, when LAM transitioners were asked why they decided to transition, many reported the desire to delay the next pregnancy. Several also perceived that their fertility had returned and feared becoming pregnant. The desire to limit future pregnancies and to protect the mother's and child's health were other commonly mentioned motivations for transitioning to other methods (Figure 7).

Figure 7: Frequency of Motivations Cited



Profiles of Transitioners

Among the 22 early and timely transitioners, half were high parity, half were low parity and a little more than half said they did not want any more children (n=12). Among the 18 delayed transitioners, a little more than half were high parity (n=10) and fewer than half were low parity (n=8). However, more delayed transitioners wanted to space (n=11) rather than limit future pregnancies (n=8). Analyses of in-depth interview data of 20 of the 40 transitioners were used to gain

¹⁹ 39.375 taka is equivalent to approximately US\$0.56.

a deeper understanding of early, timely and delayed transitioners' motivations and decision-making processes in relation to the transition.

Early Transitioners

Two of the three early transitioners participated in in-depth interviews, one high-parity mother who did not want more children and one low-parity mother who wanted more children. Both mentioned their fear of pregnancy before menses return. One attributed this concern to spotting, while the other noted that she knew a neighbor who became pregnant before menses return.

Comments from LAM transitioner #12—24-year-old; high parity; six months postpartum; five pregnancies and five living children; started using another method when her daughter was three months old:

"...about the use of the LAM method...the one thing is risky...she may get pregnant even if menses has not yet returned. Already it happened with a neighbor."

"I know without menstruation that I may become pregnant, so I took condoms as another method."

Comment from LAM transitioner #28—17-year-old; low parity; seven months postpartum; two pregnancies; one living child:

"When my child was five months, I saw a little (spotting) and I started to take pills for fear of pregnancy."

Timely Transitioners

Ten of the 19 timely transitioners participated in in-depth interviews, including five who transitioned before menses resumed and five who transitioned after. Among the five who transitioned before menses resumed, the majority (n=4) reported they did not want any more children and most reported a fear of pregnancy before menses return.

Comment from LAM transitioner #13—35-year-old; high parity; 11 months postpartum; four pregnancies; four living children:

"After completing LAM, anytime I may become pregnant...Frequent pregnancy is very problematic for me, so my husband and I took the decision to use a condom when our child was six months."

Comment from LAM transitioner #30—25-year-old; high parity; five months postpartum; five pregnancies; five living children; transitioned when she introduced foods after hearing that often women become pregnant before the return of menses:

"After three months, I started to use a condom although my menses had not yet returned. I already have five children. It would be tough to take care of more than that. It will create pressure on my husband to bring proper food and clothing, and to give proper education will be quite impossible."

Comment from LAM transitioner #33—25-year-old; high parity; 11 months postpartum; five pregnancies; four living children:

“I am taking pills for fear of pregnancy. Though my menses did not yet return, it can happen without menses.”

Those who transitioned after the return of menses perceived that they could become pregnant upon the end of LAM use.

Comment from LAM transitioner #11—27-year-old; low parity; six months postpartum; two pregnancies; two living children:

“My menses returned just as I was completing LAM and then my husband started to use a condom. It happens with many women, that without menses they become pregnant. But I am very much conscious about that...My husband and I have taken the decision to use another method, because after completing LAM there is a possibility to become pregnant. My LAM is complete, so my husband started to use a condom. We don't want any more children.”

Comment from LAM transitioner #10—27-year-old; low parity; six months postpartum; two pregnancies; one living child:

“There is a possibility of becoming pregnant if you do not use another method after completing LAM. As a result, the mother and child will both be sick and have to spend lots of money for their treatment. So I have decided to wait five years before having another child.”

Delayed Transitioners

Eight of the 18 delayed transitioners participated in in-depth interviews, five were low parity and three were high parity. Six reported the desire to have another child, while only two no longer wished to have more children. Menses had not yet resumed for any of them. The interviews of seven of the eight women suggested that they had knowledge about when to transition, but still they delayed the transition until menses resumed. While some simply mention that they took a method when their menses resumed, more specific reasons given by the four women included: forgot/meant to obtain a method but only did so once menses returned; husband away and cannot obtain injection without menses. All were aware that LAM ended.

Comment from LAM transitioner #14—21-year-old; low parity; 10 months postpartum; one pregnancy; one living child; delayed the transition for one month:

“The CM told me pills protect me from unwanted pregnancy and that would be good for me... My husband and mother-in-law suggested to me to take another method, because after completing LAM even without menstruation I may become pregnant. But I forgot these things and I started taking pills after my menses returned...After completing LAM even without menses, I may become pregnant, so I was a little bit scared when I forgot to take a method when I started giving extra food to my child.”

Comment from LAM transitioner #19—25-year-old; low parity; 11 months postpartum; four pregnancies; two living children; delayed the transition for two months:

“From attending the member meeting, I was thinking about taking another method after six months. I started to give extra food when my child was six months... Though I knew that without menses I may become pregnant, and I was scared also about that, because out of laziness I did not do it. When I saw my menses at eight months... then I took another method...”

Comment from LAM transitioner #20—19-year-old; low parity; 11 months postpartum; one pregnancy; one living child; delayed the transition for two months:

“When my child is too young, if I got pregnant once again that would be dangerous for me. My husband was out of the home for five months after my child was born and he returned after eight months. Then my menses also returned, so I took the injection.”

Unlike the others, one transitioner believed that she could not become pregnant until menses returns based on her previous experiences with return to fertility.

Comment from LAM transitioner #26—24-year-old; high parity; 11 months postpartum; three pregnancies; two living children; delayed the transition for one month:

“To prevent pregnancy I took another method after completing LAM and when menses returned. Without menses, I cannot take pills or injections, and without menses, I will not become pregnant because at the time of my first child, my menses returned after two years and then I became pregnant.”

DESCRIPTION OF NON-TRANSITIONERS

Profiles of Non-transitioners

Analyses of in-depth interview data on 20 non-transitioners were used to gain a deeper understanding of reasons for not transitioning to other methods and the decision-making processes. Six reasons were cited for not transitioning: waiting for menses, concerns about side effects, financial concerns, lack of permission from husband or mother-in-law, husband away, and waiting for a girl. Non-transitioners were grouped based on the primary reason they reported for not transitioning. Their narratives, however, reveal that there was often more than one reason for not transitioning and that these overlapped with other categories.

Waiting for Menses

Nine of the 20 non-transitioners reported that they were waiting for their menses to resume before switching to another method; although, their reasons for waiting for menses varied. Four based their decision on previous experiences with return to fertility after a pregnancy. Another four heard or believed that menses was necessary before obtaining a method. One first-time mother believed that

menses had to return before a woman could become pregnant. One of these non-transitioners switched to periodic abstinence to prevent pregnancy before menses returned.

Previous Experiences with Return to Fertility

Comment from LAM non-transitioner #4—35-year-old; high parity; six months postpartum; five pregnancies; five living children (ages 12, 8, 6 and 2 years old); never used a modern method other than LAM:

“My mother-in-law suggested to me not to conceive any more children and if I want to get a method, then I should go to Shimantik [clinic] or any doctor to get a method. However, my husband does not want that. I cannot take a decision without my husband. Still I did not tell anything to my husband, because I am waiting for my menses to return. Without menstruation, I will not get pregnant. I know that, because I have five children and never got pregnant without menstruation. So I decided when my menses returns, then I will discuss taking a method with my husband.”

Comment from LAM non-transitioner #5—25-year-old; high parity; 10 months postpartum; six pregnancies; four living children (ages 11, 9 and 7 years and 10 months):

“I have my own assumption, without menses return I never got pregnant. So when menses will return, I will take a method.”

Comment from LAM non-transitioner #21—27-year-old; high parity; 10 months postpartum; four pregnancies; four living children (ages 9, 6 and 3 years and 10 months):

“If not anyone wants any more babies within two years then she needs to take a method... My personal experience says that my menses will not come within three years after delivery. It has happened for me for every child. Without menses, I’ll not become pregnant.”

Believes Menses Is Necessary before Using a Method

Comment from LAM non-transitioner #24—30-year-old; high parity; four months postpartum; four pregnancies; three living children:

“I have no clear idea about family planning, but now I want to take a method. I am not taking a method, because my menses has not yet returned. When my menses returns I will take a method. I know that the doctor will not provide any methods if menses has not yet returned.”

Comment from LAM non-transitioner #29—25-year-old; high parity; eight months postpartum; five pregnancies; five living children; before obtaining a method, she and her husband followed their own FP rule (after the end of her menses, no sex for four days):

“After the end of LAM, I went to a health facility to get an injection, but they said before menses returns, they will not give me an injection. They also said that now I can take pills, [but I don’t want to take pills]. I don’t want any more babies... My husband and I decided when menses returns, I’ll take an injection.”

First-Time Mother with No Previous Experience with Return to Fertility

Comment from LAM non-transitioner #32—25-year-old; low parity; 10 months postpartum; one pregnancy; one living child; four months pregnant:

“When my baby was eight months old, I went to Shimantik [clinic] for taking a method, but then I learned that I was already two months pregnant... I am a new mother. I thought that without menses, no one can become pregnant. I thought when my menses returns, I’ll take a method.”

Concerned about Side Effects

Three of the 20 non-transitioners interviewed reported fear of side effects as the main reason for not transitioning. All three knew that they should transition, but had experienced side effects first hand or observed others’ experiences—particularly in relation to injections and IUDs—which prevented them from transitioning. Specific concerns mentioned included: blood pressure, headache, weight gain, effects on breast milk and weakness. One transitioned to periodic abstinence.

Comment from LAM non-transitioner #6—22-year-old; low parity; 12 months postpartum; two pregnancies; one living child; using “*Nirapod Din-Khal*” or periodic abstinence since her baby was four months old (during menses and three to four days after menses, she and her husband were sexually active, then for 10 days they abstained), did not become pregnant, so thought it was effective:

“If I don’t use any method after the ending of LAM, I may become pregnant again. If any one of the criteria of the LAM method has ended, I may become pregnant even if my menses has not yet returned. Without menses, anyone can become pregnant again... Now I am using a traditional method. I think to use any modern method is a great disturbance, such as sometimes I forget to take pills. I am afraid to take injections because my blood pressure may become high. Also, headache, pain in the hips, weight gain may arise. So I think traditional methods are more effective than modern methods.”

Comment from LAM non-transitioner #15—25-year-old; low parity; four months postpartum; two pregnancies; one living child:

“I have to use another method when the LAM method is inactive. If my menses has returned or I give extra foods to the baby, then I have to use another method... I am afraid that if I use any method, I will not have enough breast milk to give my child, so my husband and I decided to live separately until the baby is 6 months.”

Comment from LAM non-transitioner #17—25-year-old; low parity; 10 months postpartum; one pregnancy; one living child; observed her sister-in-law’s experiences with side effects from injections and IUDs:

“I only know injections and IUD... I am afraid of using any methods. I saw illness of other women from using injections and they had to pay a lot of money for their treatment. Those women are so weak that they are unable to move. They don’t work properly. So that I am afraid to take a method.”

Financial Concerns

Two of the 20 had concerns about the cost of methods and the cost of “treating side effects.” These mothers’ reasons for not transitioning were similar to concerns about side effects, but they reported that they were more concerned about the cost of either the methods or the cost of treating side effects than the side effects themselves.

Comment from LAM non-transitioner #1—26-year-old; high parity; six months postpartum; five pregnancies; four living children:

“I know that after six months any mother can take injections, pills, and implants. I also know that anyone can become pregnant without menses... If I take a method, I have to pay some money. I asked for some money from my husband, but he did not give me the money. When I took injections [before] I had to face a lot of problems like headaches, weakness, bleeding. Because of side effects, my husband forbid me to take a method. [He had to pay a large amount of money for treatment]. But now I want to take a method.”

Comment from LAM non-transitioner #36—18-year-old; low parity; 12 months postpartum; one pregnancy; one living child:

“I am a poor woman. If I take any method, I have to pay some money and every method has some side effects. [So my husband and I decided not to live together on risky days].”

Lack of Permission from Husband or Mother-in-Law

Two of the 20 interviewed reported lack of permission from their husband and mother-in-law as the primary reason for not transitioning. In both cases, there was an underlying suggestion that the husband and mother-in-law believed it is better to use a method once the couple has completed their family.

Comment from LAM non-transitioner #40—25-year-old; low parity; eight months postpartum; two pregnancies; one living child:

“There is a satellite clinic next door. In the clinic, they provide pills, and injections, but my husband and mother-in-law forbid me to take any methods. They said I might become ill by using a method. They also said- take another baby then take a method.”

Husband Away

One of the 20 interviewed had not transitioned because her husband was living abroad.

Comment from LAM non-transitioner #18—26-year-old; low parity; six months postpartum; two pregnancies; two living children:

“I don't have to use any methods right now, because my husband currently does not live with me.”

Waiting for a Girl before Using FP

One mother was waiting for a girl before using a method to limit future pregnancies.

Comment from LAM non-transitioner #27—25-year-old; high parity; seven months postpartum; three pregnancies; three living children:

“After using LAM one can go to Shimantik [clinic] and take any method like injection, pills, implants... I want a girl. That's why I am not using a method. After the birth of a girl, I want to limit (sterilization)... I have three sons now.”

Barriers and Facilitators to LAM Transition

An analysis of barriers to the transition explored nine determinants of the LAM transition and was triangulated with results from the in-depth interviews. The analysis indicated that transitioners and non-transitioners differed on their perceptions of: the timing of their personal risk for pregnancy after a birth, vulnerability to pregnancy when each criterion changes, social support for the transition, and the advantages and disadvantages of the transition (**Table 6**).

Table 6: Key Differences in Barriers by Transition Status

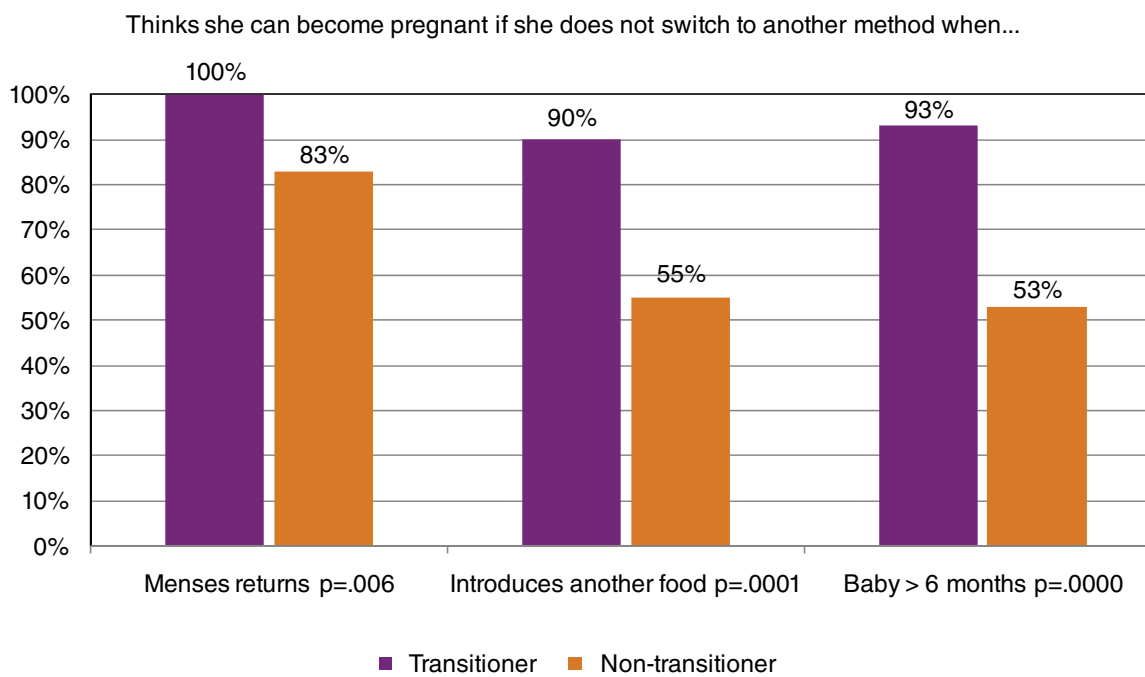
DETERMINANTS	TRANSITIONERS (%) n=40	NON-TRANSITIONERS (%) n=40	p-VALUE
<p>Perceptions of the timing of their personal risk for pregnancy after a birth</p> <p>Can only become pregnant if do not use LAM or a FP method more than 1 year after delivery</p>	13%	38%	0.010
<p>Perceived vulnerability to pregnancy when each criterion changes</p> <p>Thinks she can become pregnant if do not switch from LAM to another method when MENSES RETURNS</p> <p>Thinks she can become pregnant if do not switch from LAM to another method when INTRODUCES OTHER FOODS</p> <p>Thinks she can become pregnant if do not switch from LAM to another method when BABY > 6 MONTHS</p>	100%	83%	0.006
<p>Thinks she can become pregnant if do not switch from LAM to another method when INTRODUCES OTHER FOODS</p> <p>Thinks she can become pregnant if do not switch from LAM to another method when BABY > 6 MONTHS</p>	90%	55%	0.001
<p>Thinks she can become pregnant if do not switch from LAM to another method when BABY > 6 MONTHS</p>	93%	53%	0.000
<p>Perceived importance of switching to another method when each criterion changes</p> <p>Very important to switch to another method to delay a pregnancy WHEN INTRODUCES OTHER FOODS</p> <p>Very important to switch to another method to delay a pregnancy WHEN BABY > 6 MONTHS</p>	78%	48%	0.005
<p>Very important to switch to another method to delay a pregnancy WHEN BABY > 6 MONTHS</p>	83%	55%	0.008
<p>Perceived social acceptability of the transition</p> <p>When any one of the 3 criteria changes, she thinks most of the people that she knows approved/would approve of her transitioning</p> <p><i>Who would support:</i></p> <p>Husband</p> <p>CHW</p>	95%	78%	0.023
<p>Husband</p> <p>CHW</p>	98%	63%	0.000
<p>CHW</p>	75%	50%	0.021

DETERMINANTS	TRANSITIONERS (%) n=40	NON-TRANSITIONERS (%) n=40	p-VALUE
Who would not support:			
Husband	0%	25%	0.001
Mother-in-law	3%	15%	0.048
No one	83%	50%	0.002
Advantages of the transition:			
Spacing can improve child health	68%	45%	0.043
Disadvantages of the transition:			
Side effects	18%	38%	0.045
None	83%	58%	0.015

Transitioners were more likely to believe:

- That they could become pregnant if they did not switch to another method when any one of the criteria changes (**Figure 8**)
- The importance of switching to another modern method when introduced foods to baby or when their baby was older than six months
- That they could easily transition with current knowledge and skills
- That they had social support for using a method, particularly from their husbands
- The advantages of spacing on child health

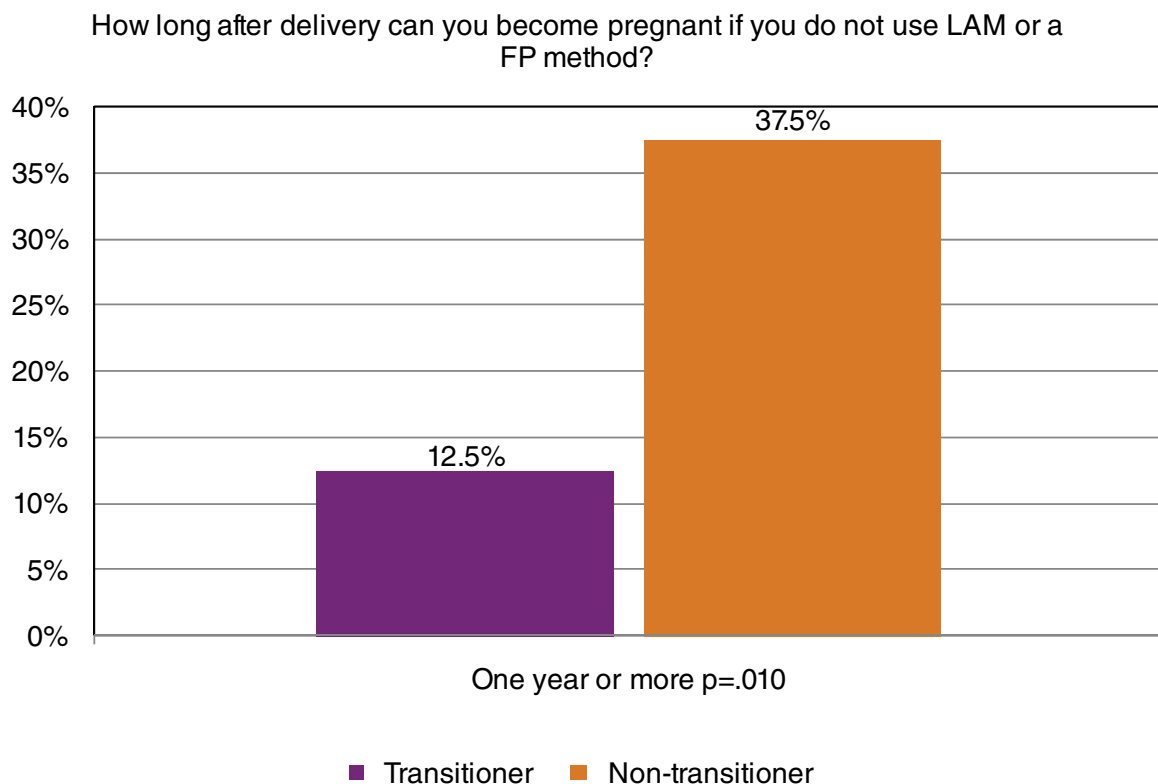
Figure 8: Comparison of Perceptions of Pregnancy Vulnerability If Do Not Switch to another Method after LAM, by Transition Status



Non-transitioners were more likely to:

- Believe that they were **only** at risk for pregnancy one year or more after a delivery, if not using LAM or another FP method (**Figure 9**); illustrated by a non-transitioner (Bangladesh, LAM non-transitioner with four children) during an in-depth interview: “*I do not know about others, but for me, I become pregnant one year and five months after a birth.*”
- Report that their husbands and mothers-in-law would not support the transition
- Perceive side effects as a barrier to transitioning to other modern methods

Figure 9: Comparison of Perceptions of Fertility Return by Transition Status



CONCLUSIONS AND RECOMMENDATIONS

Key Findings

The goal of this analysis was to understand the process of deciding to transition from LAM to other modern FP methods and the key barriers to transition. Key findings include:

Decision-making process and cues to transition:

- In this study, all LAM transitioners switched to another modern method by nine months postpartum, with more than half switching to another method within the same month as the first criterion changed.

- LAM transitioners were particularly motivated to transition by the desire to delay the next pregnancy, perception that their fertility had returned and fear of becoming pregnant. The desire to limit future pregnancies and to protect the health of the mother and child were other commonly mentioned motivations for transitioning.
- The resumption of menses was an important cue affecting LAM users' decisions about when to transition, particularly for non-transitioners, but also for transitioners. Among non-transitioners that participated in in-depth interviews, almost half reported that they were waiting for menses before initiating method use. For transitioners, almost three-quarters of the transitioners switched with the resumption of menses, which in many cases coincided with changes in other criteria. Among those who delayed the transition, the primary reason was related to the return of menses.

Barriers to the transition:

- Key barriers to a timely transition include: waiting for menses, misconceptions about the timing of fertility return, concerns about side effects, financial concerns about purchasing methods and “treating side effects,” and perceived lack of social support from their husbands and mothers-in-law.
- There are many reasons that women wait for the return of menses prior to using a method. Basing the decision on previous experiences with return to fertility after a pregnancy was frequently raised. Similarly, several women held the belief that the return of menses was necessary to obtain a method.
- Non-transitioners were more likely to believe that they were only at risk for pregnancy one year or more after a delivery, if not using LAM or another FP method.
- There was no difference between transitioners and non-transitioners perceptions about the consequences of closely spaced births and the severity of the outcomes of closely spaced births. However, transitioners were more likely to perceive good child health outcomes as an advantage of the transition.

Recommendations

In Sylhet, Bangladesh, effectively including LAM and the transition among the PFP method choices for women in the first year postpartum offers an important opportunity for improving the health of mothers and babies. Addressing barriers to the transition helps to ensure that LAM users achieve the healthiest spacing of future pregnancies. Based on barriers and motivating factors to transition identified, the following recommendations to HFS program messages and interventions were made to address low perceived of risk of pregnancy, misconceptions about the timing of return to fertility, concerns about side effects of other methods and perceived lack of social support for the transition. Key recommendations include:

- **Waiting for menses based on previous fertility experiences:** HFS counseling messages already raised awareness about risk for pregnancy by six weeks postpartum if a woman is not protected by LAM or another FP method. They also already addressed the risk of pregnancy before menses resumes. Findings from this analysis suggest that additional messages are necessary to emphasize

that the return to fertility is not predictable and differs after each pregnancy; so decisions about when to switch to another method should not be based on previous experiences with menses return and fertility. In addition, the inclusion of testimonials during community meetings by women who became pregnant before menses returned can be used to heighten women's perception of their risk for pregnancy prior to menses return.

- **Misconceptions about the timing of return to fertility:** Prior to the analysis, HFS LAM and transition household counseling took place within the first five months postpartum. However, additional counseling between 9–12 months postpartum may be important to prevent a delay in the transition due to misconceptions about the timing of the return to fertility. Counseling can be integrated with existing routine CHW household visits occurring every other month. During these visits, it is suggested that CHWs assess the mother's perception of when she can become pregnant, and based on her response: discuss the return to fertility after LAM use, remind the mother that LAM is a temporary method and provide or refer her for another modern method.
- **Concerns about side effects:** In addition to counseling, HFS CHWs have recently begun distributing condoms and pills. During the course of distribution, they are addressing women's concerns about side effects as well.
- **Lack of social support for the transition:** Special considerations should be given to assist husbands and mothers-in-law to support women in the transition. Their participation in community meetings should be reinforced. During the meetings, information about the return to fertility after LAM, when LAM users should transition, side effects and how to support mothers in the transition could improve support.

These findings and recommendations highlight that barriers to the LAM transition center around perceptions about return to fertility, concerns about side effects and lack of social support for using a method. Findings about the effects of “waiting for menses” and perceptions of a personal fertility pattern on the transition are similar to other studies.²⁰ Addressing these issues can help to ensure that LAM use contributes to the healthiest spacing of pregnancies. (Barriers and recommendations are summarized in **Annex I**.)

²⁰ Bongiovanni et al (2005.); Salway, S and Nurani, S. (1998). Uptake of contraception during postpartum amenorrhea: Understandings and preferences of poor, urban women in Bangladesh. *Social Science Medicine*, 47(7), 899–909.

ANNEX I: SUMMARY OF BARRIERS AND RECOMMENDATIONS

Barriers identified	Recommendations
Waiting for menses before using a method, based on previous personal experiences with return to fertility	<p>Current messages:</p> <p>Remain careful, because you can become pregnant again sooner than you want. If you do not only breastfeed your baby, your ability to become pregnant again can return 45 days after you have delivered your baby. Your fertility may return before your next menses.</p> <p>Added message:</p> <p>When a woman can become pregnant again after a delivery varies for each one of her pregnancies. You cannot predict fertility based on previous experiences.</p> <p>You can begin a method (injections and pills) even before your menses resumes</p> <p>Added interventions:</p> <p>Testimonials from women in the community who became pregnant before menses during community meetings.</p>
Misconceptions about timing of risk of pregnancy after a delivery if not using LAM or another FP method	<p>Added intervention:</p> <ul style="list-style-type: none"> •Include counseling on LAM transition during household visits between 9 -12 months to facilitate delayed transitioners to switch to other methods; Begin the session by asking the mother directly when she thinks she is at risk for becoming pregnant <p>Messages to included during later visits:</p> <ul style="list-style-type: none"> •LAM is a short-term, temporary contraceptive method, that can only offer protection up to six months. You are no longer protected from pregnancy by LAM. •When a woman can become pregnant again after a delivery varies for each one of her pregnancies. You cannot predict fertility based on previous experiences. •Even if your menses has not yet returned, switch to another modern method for healthy spacing of your next pregnancy or protection from an unplanned pregnancy.
Concerns about side effects	<p>Current intervention:</p> <p>Community health workers to be sure to counsel about managing side effects during distribution of condoms and combined orals contraceptives or refer her to a health worker for further explanation.</p>
Perceived lack of social support from husbands and mothers-in-law	<p>•Current intervention: Participation of influential men and women including husbands and mothers-in-law community meetings</p> <p>Recommended added interventions:*</p> <ul style="list-style-type: none"> •Reinforce participation in CM •Provide additional information to husbands and mothers-in-law about when mothers should transition, side effects and how to support mothers in the transition •Explore ways to improve couples communication

ANNEX II: LAM TRANSITION DECISION-MAKING PROCESS—TIMING AND CUES TO TRANSITION

In the graphs below, the numbers on the x-axis represent individual transitioners. The y-axis represents the number of months after delivery (postpartum month). For each transitioner, four data points are plotted: 1) the postpartum month of the actual end of LAM use (yellow line), 2) the reported end of LAM use (purple line), 3) the month when the mother introduced foods (blue square), and 3) the month when menses resumed (red circle). The six month criterion is represented by the six month postpartum line on the graph. The postpartum month of the actual end of LAM use (yellow line) and the reported end of LAM use (purple line) are represented as continuous lines to give a cumulative perspective and visual image of those who transitioned early, on time and delayed, as well as the interval of the delay. The criteria (food and menses) are plotted on the lines to explore which criterion was more likely to change when women reported transitioning, compared across early, timely and delayed transitioners.

A similar graph was done for non-transitioners, but the purple line represents the postpartum month at the time of the interview. The chart for non-transitioners was meant to explore if LAM non-transitioners had similar cues to transition (changes in criteria), despite the fact that they did not act on those cues to transition.

LAM Transitioners: Timing and Cues to Transition

Among the 22 early and timely transitioners (transitioners #1–22), three transitioned early before any criteria changed (transitioners #1–3). Another 19 of the 22 transitioned on time, defined as switching within the same postpartum month as when the first criterion changed (transitioners #4–22). A total of eight of the 22 who transitioned by the time the first criterion changed, switched before the return of menses (transitioners #1, 2, 3, 6, 7, 10, 12, 13). (See **Figure A II-1**.) Among the 18 LAM users who waited one month or more after the first criterion changed before transitioning (transitioners #23–40), 15 waited for menses before switching to another method (transitioners #23, 24, 25, 26, 27, 28, 30, 31, 32, 33, 35, 36, 37, 38, 40). Only three of the 18 who delayed the transition, switched without the return of menses (transitioners #29, 34, 39).

Non-transitioners: Interval between the Actual End of LAM Use, Current Month Postpartum and Cues to Transition

Similarly, the interval between the actual end of LAM use and the current month postpartum was analyzed. It was explored whether LAM non-transitioners' experienced the same cues to transition, but did not act on the cues to transition. The end of LAM use versus the current month postpartum and the points indicating when each criterion changed, were charted for non-transitioners (**Figure A II-2**). At the time of the interview, four non-transitioners were still within the same month that the first criterion changed. For 36 non-transitioners, at the time of the interview, it was one to 11 months after the actual end of LAM use (non-transitioners #5–40). Among non-transitioners, menses had not yet resumed for 27 women (80.0%), (non-transitioners #1, 3, 4, 5, 6, 7, 10, 11, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 32, 33, 35, 39). However, for 13 non-

transitioners (32.5%), menses had returned (non-transitioners #2, 8, 12, 13, 28, 30, 31, 34, 36, 37, 38, 40), indicating potentially other reasons for not transitioning.

Figure A II-1: Transitioners by Transition Event (Criteria Changed)

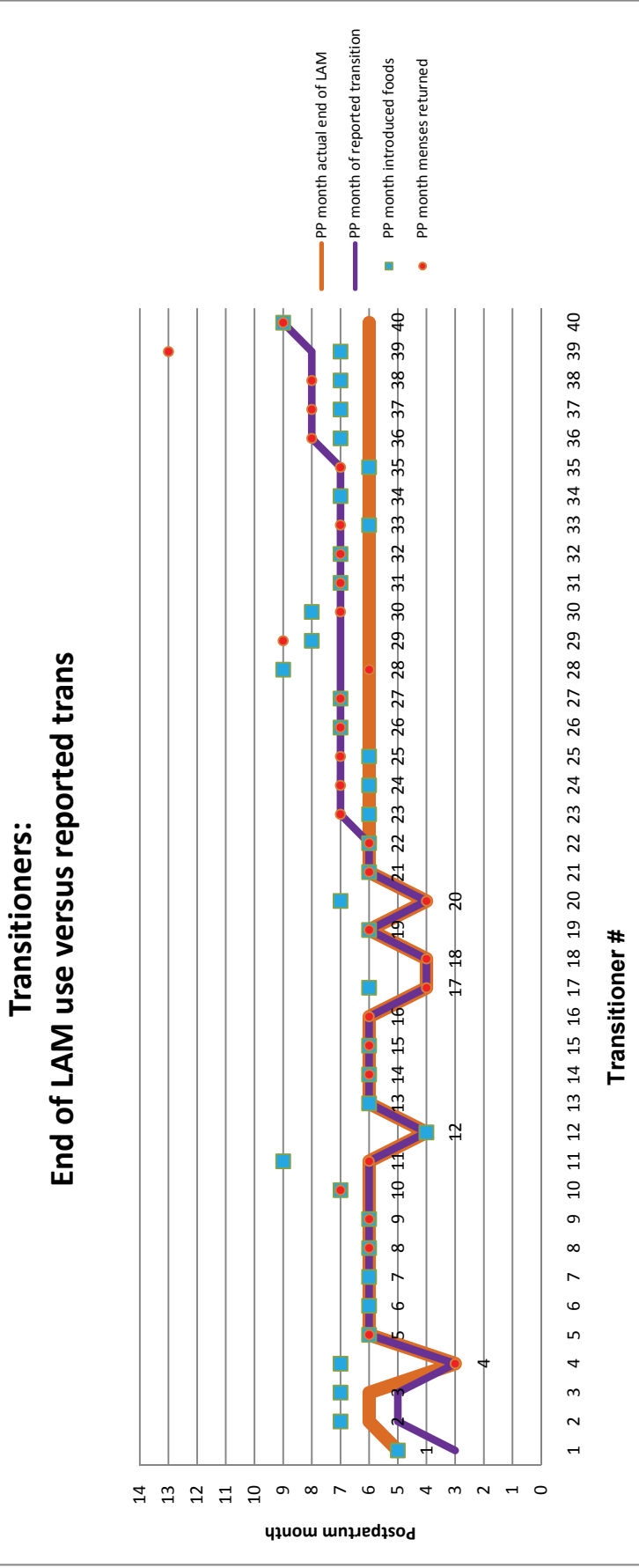


Figure A II-2: Non-Transitioners by Transition Event (Criteria Changed)

