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Healthy Fertility Study

**Integrating Family Planning within a
Community-Based Maternal and Neonatal
Health Program in Rural Bangladesh**

March 25, 2011

Overview of Presentation

- Background
- Formative research
- HFS design and methods
- Findings to date
- Integration with MNCH services
- Lessons learned



Background



Evolution of MNCH packages in Sylhet:
Projahnmo in Bangladesh

Projahnmo in Bangladesh: (2002-2006)

- Designed a community-based maternal and newborn care intervention package and evaluated the effectiveness of the package using a cluster randomized design
- A home care package which involved CHW antenatal and postnatal home visits and management of sick newborn reduced NMR by 34% (Baqui et al., Lancet, 2008)
- Trained CHWs can safely assess, classify and treat sick newborns using parenteral antibiotics at home (Baqui et al., PIDJ, 2009)
- A postnatal home visit on day 1 or 2 of birth was associated with about 2/3rd lower neonatal mortality (Baqui et al., BMJ, 2009)

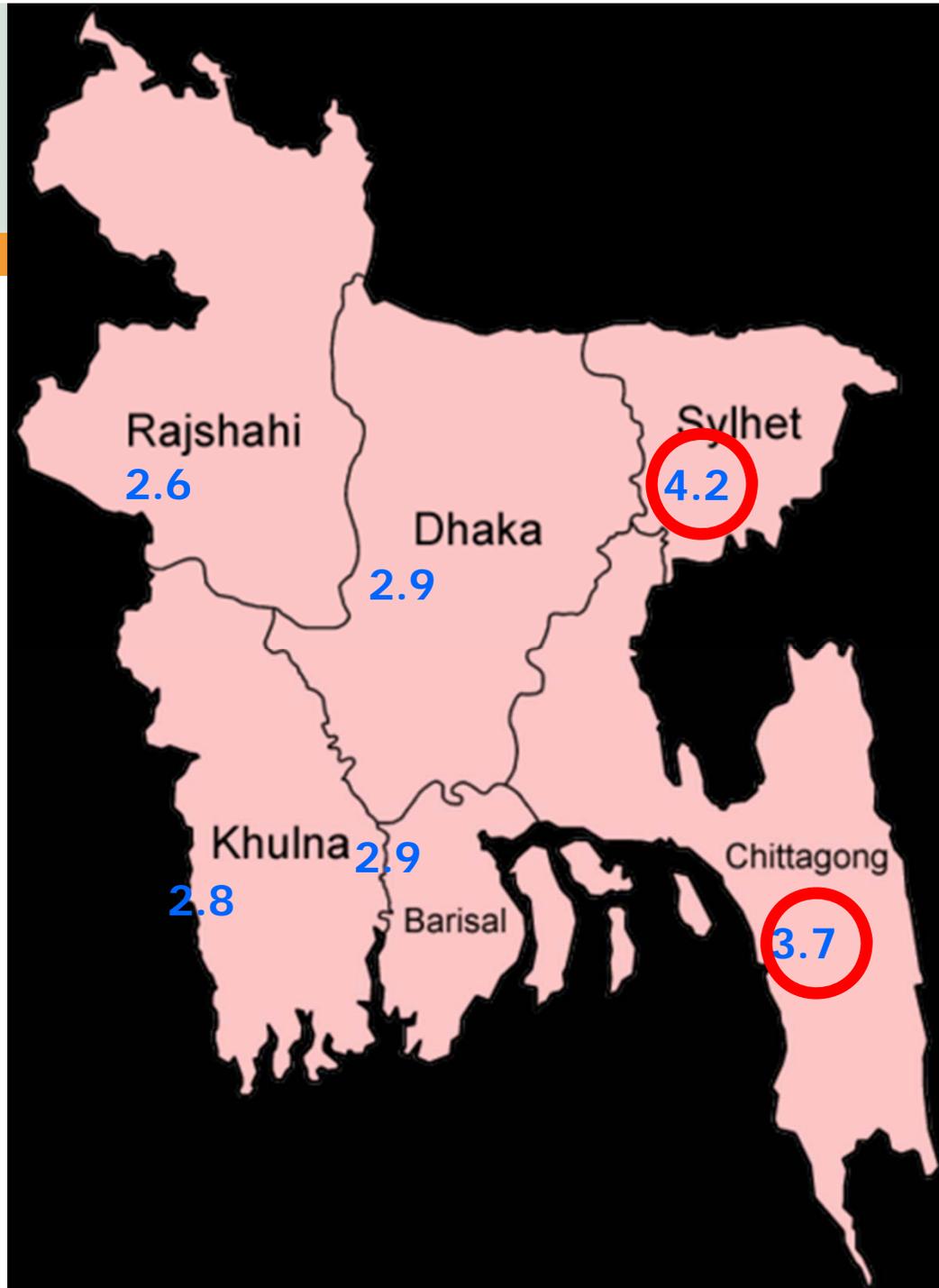
Projahnmo in Bangladesh: Other Studies (2006-present)

- Impact of Chlorhexidine (CHX) cleansing of umbilical cord (2006-2009): SNL/BMGF and USAID
- Healthy Fertility Study to integrate postpartum FP in MNH program (2007-ongoing): USAID
- Simplified Antibiotic Therapy Trial for Outpatient/home treatment of infections in young infants (2009-2013): USAID
- Etiology of Newborn Infections in South Asia (ANISA) (2011-2013) : BMGF
- Maternal Infection and preterm Birth (2011-2015): NICHD/NIH



Formative research findings: Jan-Jun 2006

TFR for Bangladesh Divisions BDHS 2004



National TFR = 3.0

Study site in
Sylhet District

Background: *Bangladesh and Sylhet Division 2007*

	BGD	Syl
Unmet FP Need	17%	26%
Contraceptive Prevalence Rate (any method)	56%	31%
Total Fertility Rate	2.7	3.7
Birth Intervals:		
< 24 months	15%	26%
< 36 months	37%	57%

Source: Bangladesh DHS 2007

Study Objectives

- Understand context of current fertility-related practices
- Identify opportunities for:
 - delaying first birth past age 19
 - increasing birth interval to minimum of 36 months
- Determine communication approaches to promote healthy timing and spacing of pregnancy

Study Components

- Qualitative interviews, focus groups
- Evaluation of family planning services: facility audit, exit interviews and structured observations of counseling
- Household survey to measure knowledge, perceptions, practices and access to family planning
- Consultation and consensus-building with opinion leaders

Perceived Risks and Benefits of Delaying First Pregnancy

Risks

- Focused on potential morbidity for the mother, but not mortality.
- Village doctors and TBAs listed physical risks to the mother such as obstetric emergencies and increased need for facility-based birth, but said that delaying first child had no impact on the child.

Benefits

- Primarily economic: saving money in order to provide for the care of the child.

Birth Spacing Ideals and Practices

- The desired number of children ranged from 2 to 4, and most women (80% RDW) expressed a preference for a birth space of at least three years.
- No immediate action taken to delay pregnancy after childbirth.
- If a neonatal death or stillbirth occurs, there is pressure for a replacement child, especially for couples with few or no children.
- Wives, husbands and mothers-in-law have all said that pregnancy can occur anytime after the 40 days period of postpartum confinement after the woman's menstrual cycle resumes, but only the government health workers expressed knowledge of LAM.

Perceived Risks and Benefits of Birth Spacing

Risks

- For mother and newborn: weakness, illness, and increased probability of death during delivery.
- For the baby: increase in disease prevalence and incidence, possible infant mortality.
- Household troubles “*jamela*” and economic costs to the family.

Benefits

- Caring for the baby and reduced incidence of sickness.

Recommendations from Dhaka meeting

13 Dec 2006

- LAM, with emphasis on immediate, exclusive breastfeeding, until at least 6 months, should be a key method promoted in the study
- Promote Birth-to-Pregnancy interval of at least 24 months
- Promote awareness of risks associated with closely spaced births and adolescent childbearing
- Promote delayed initiation of childbearing for adolescent women until age 19+

Healthy Fertility Study:

Integrated model of PPFPP & MNCH



Newborn care



**Postpartum FP counseling and
contraceptive distribution**

Study Objectives

- To develop and test an integrated Family Planning, Maternal and Neonatal Health (FP/MNH) service delivery approach
 - Healthy fertility knowledge and practices e.g., pregnancy spacing, LAM, use of contraceptives
 - Pregnancy spacing
 - Adverse pregnancy outcomes
- To assess the strengths and limitations of integrating FP into an ongoing community-based MNH care program

Study Objectives

- To assess the impact of the intervention package on contraceptive knowledge and practices including LAM during the extended postpartum period
- To assess the impact of the intervention package on pregnancy spacing

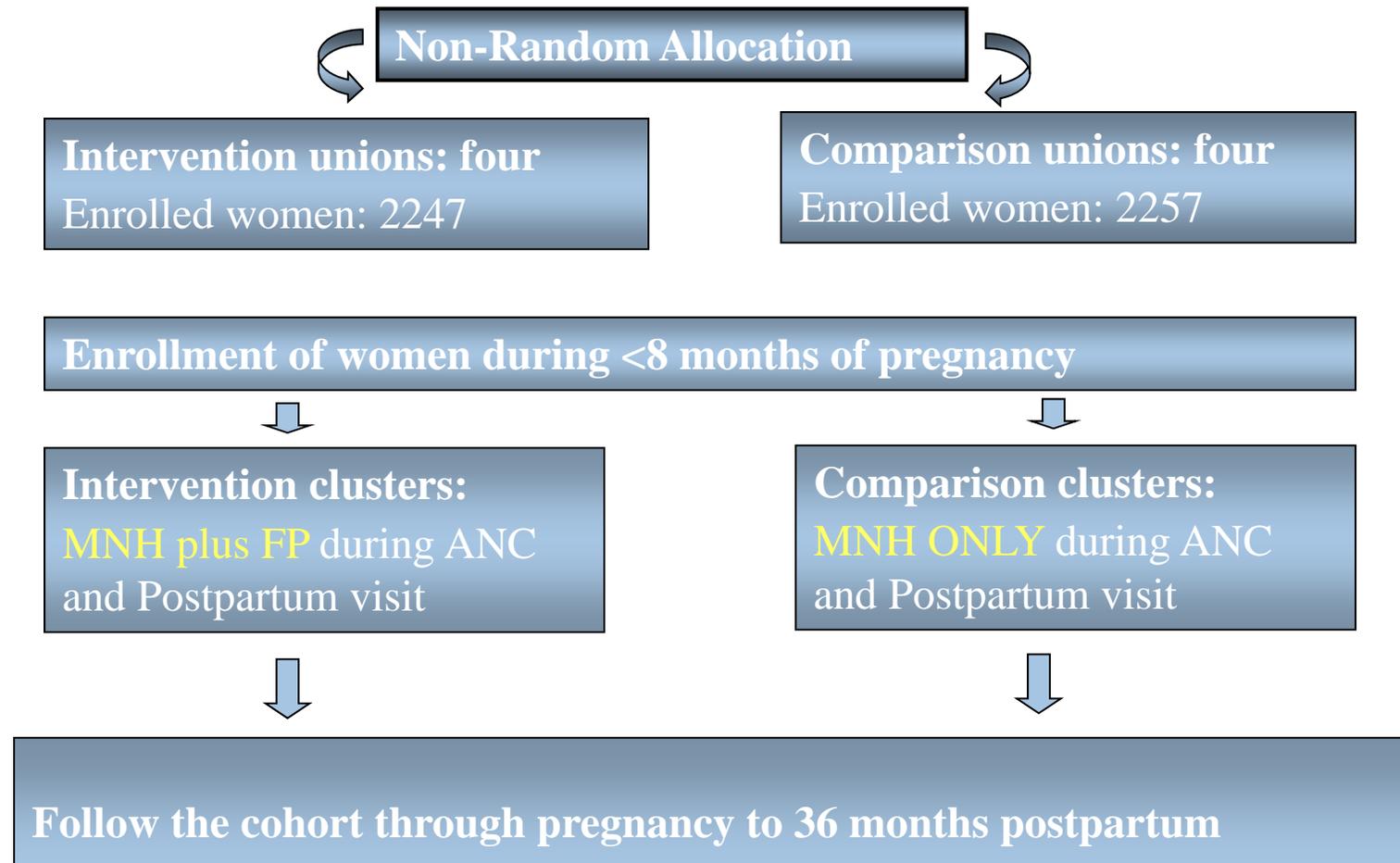
Study Sites

- Sylhet district
- Zakiganj & Kanaighat sub district
- Intervention area: 4 unions : Manikpur, Kajalshar, Jhingabari & Dakshin Banigram
- Comparison area : 4 unions : Sultanpur, Kholachara, Purbo Dighirpar & Paschim Dighirpar

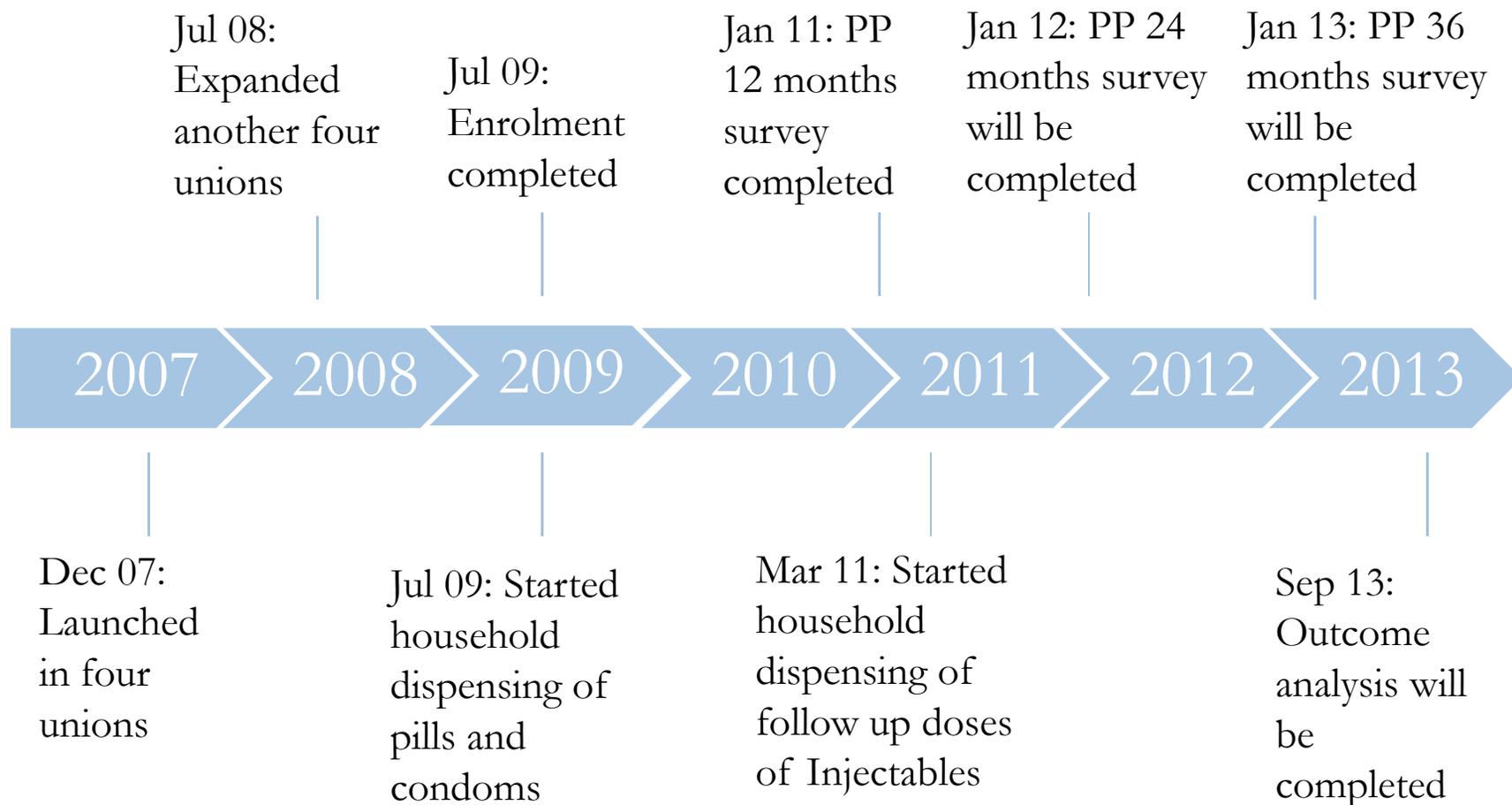


Study Design

Study sites: eight unions in two sub-districts in Sylhet district, Bangladesh



Study Timeline



Key Intervention Contents

1. Antenatal counseling and care
2. Birth and newborn care preparedness
 - Counseling, negotiation and demonstration
3. Delivery and immediate newborn care
4. Postpartum care and counseling
 - Return to fertility, LAM+, EBF, healthy spacing of pregnancy
5. Community based distribution of pills and condoms and refer to facility for other methods
6. Community mobilization and advocacy

Intervention Delivery Strategy

1. Capacity strengthening:
 - **Training**
 - **Orientation**
2. Community-based advocacy and behaviour change communication approach:
 - **Household level through Community Health Workers (CHW)**
 - **Community level through Community Mobilizers**
 - **Facility level through Service Providers**

Community Health Workers

Young woman with grade 10 education from the local community

Training received:

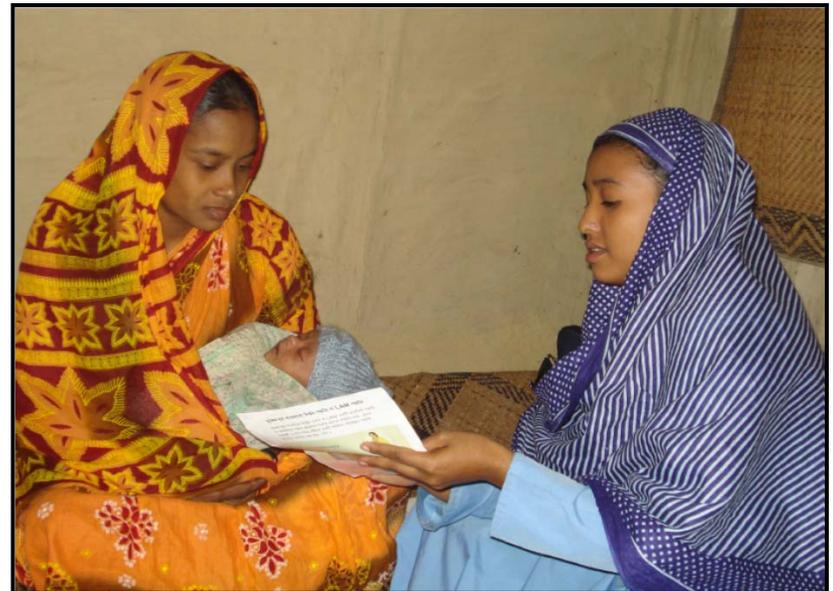
- MNH: 21 days
- HTSP, PFP & LAM: 3 days
- FP: 4 and 1/2 days
- Injectables: 1 and 1/2 days theoretical and practical in field



Household Level Activities Performed by CHWs

- Conduct pregnancy surveillance
- Perform household counseling visits: during pregnancy and postpartum period using information, education, and communication (IEC) materials
- Screen women, dispense pills, condoms and follow up doses of injectables, and refer to Government of Bangladesh (GOB)/NGO facilities for other methods

One CHW for ~4000 population



One-to-one counseling by CHW; Photo credit: Salahuddin Ahmed

CHW Counselling Topics and Timing

Messages	FP integrated with MNH program			Additional
	During pregnancy	Day 6 postpartum	Day 29-35 postpartum	Month 2-3 & 4-5 PP
ANC	√			
Newborn Care, EBF	√	√	√	
Return to fertility		√	√	√
EBF, LAM and transition	√	√	√	√
HTSP	√	√	√	√
FP methods			√	√
Visit to facility	√	√	√	√

Distribution of Pills, Condoms, and Injectables by CHWs

- Distribution of pills and condoms to study enrolled postpartum women began July 2009 and follow up doses of Injectables began March 2011
- Accepted by young, unmarried CHWs and their families
- Accepted by the local, religiously conservative community



Injectables training; Photo credit: Salahuddin Ahmed

Community Level and Facility Level Intervention Delivery Strategy

One male and one female Community Mobilizer for 20,000 population. Key activities of the community mobilizers include:

- **Conduct advocacy meetings with community leaders, religious leaders, teachers and their wives**
- **Facilitate targeted male/female group meetings**
- **Conduct one-to-one visits to develop role models on LAM**

Key activities of GOB/NGO providers at the facility level include:

- **Provide postnatal care**
- **Counsel about PFP methods including LAM**
- **Provide FP methods**



Male community meeting by CM; Photo credit: Salahuddin Ahmed



Facility; Photo credit: Salahuddin Ahmed



Data Collection

Follow up Data Collection and Analysis Schedule

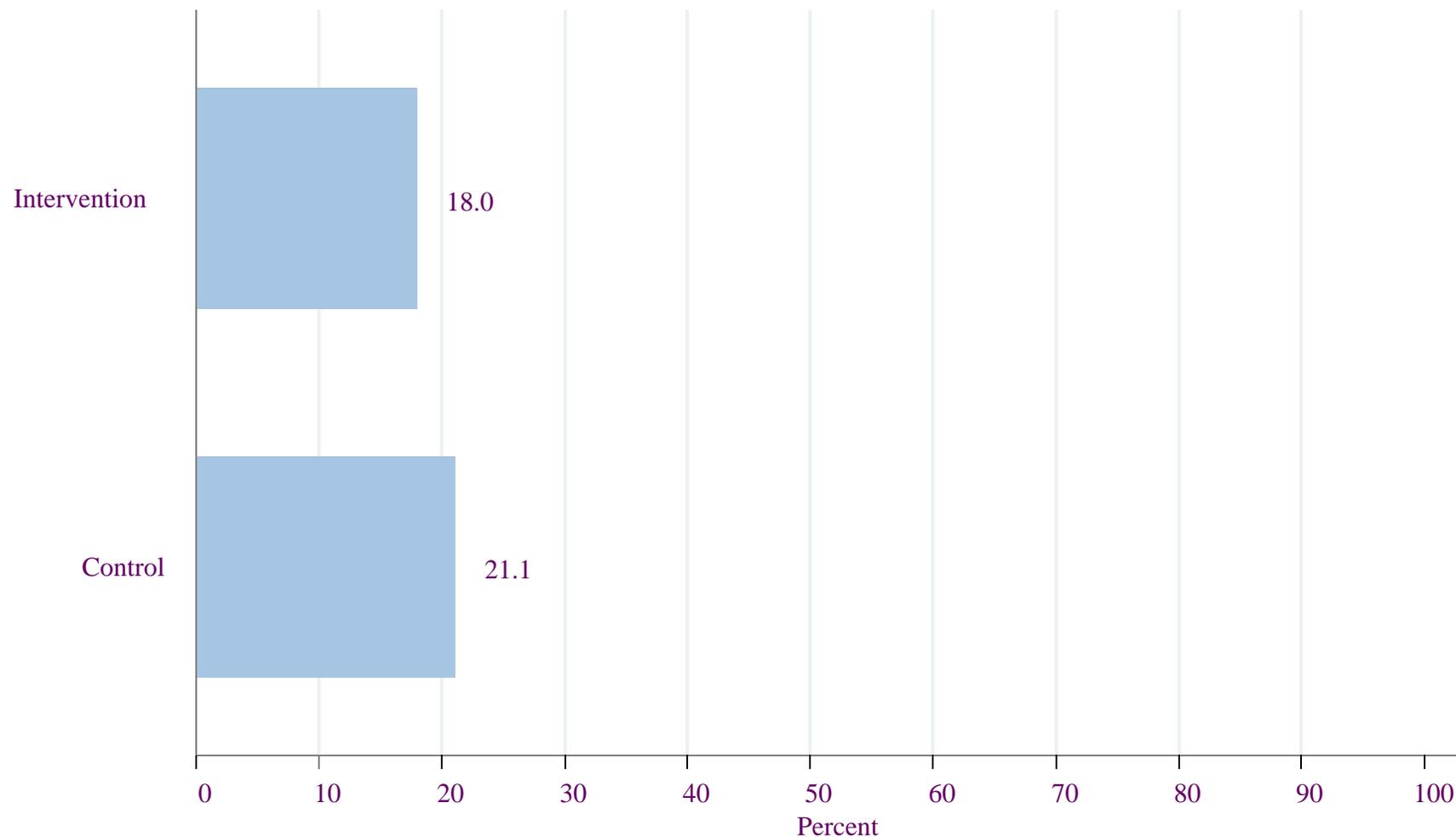
Follow up at PP months	Data collection		Data entry and analysis
	Beginning	End	
3 months	Sep 2008	Mar 2010	Completed
6 months	Apr 2009	Jul 2010	Completed
12 months	Jun 2009	Dec 2011	Mar 2011
18 months	Sep 2009	Jun 2011	Sep 2011
24 months	Jan 2010	Dec 2012	Apr 2012
30 months	Jun 2010	Jun 2012	Oct 2012
36 months	Jan 2011	Jan 2013	Jun 2013



Results

Starts in a Low Performance Area

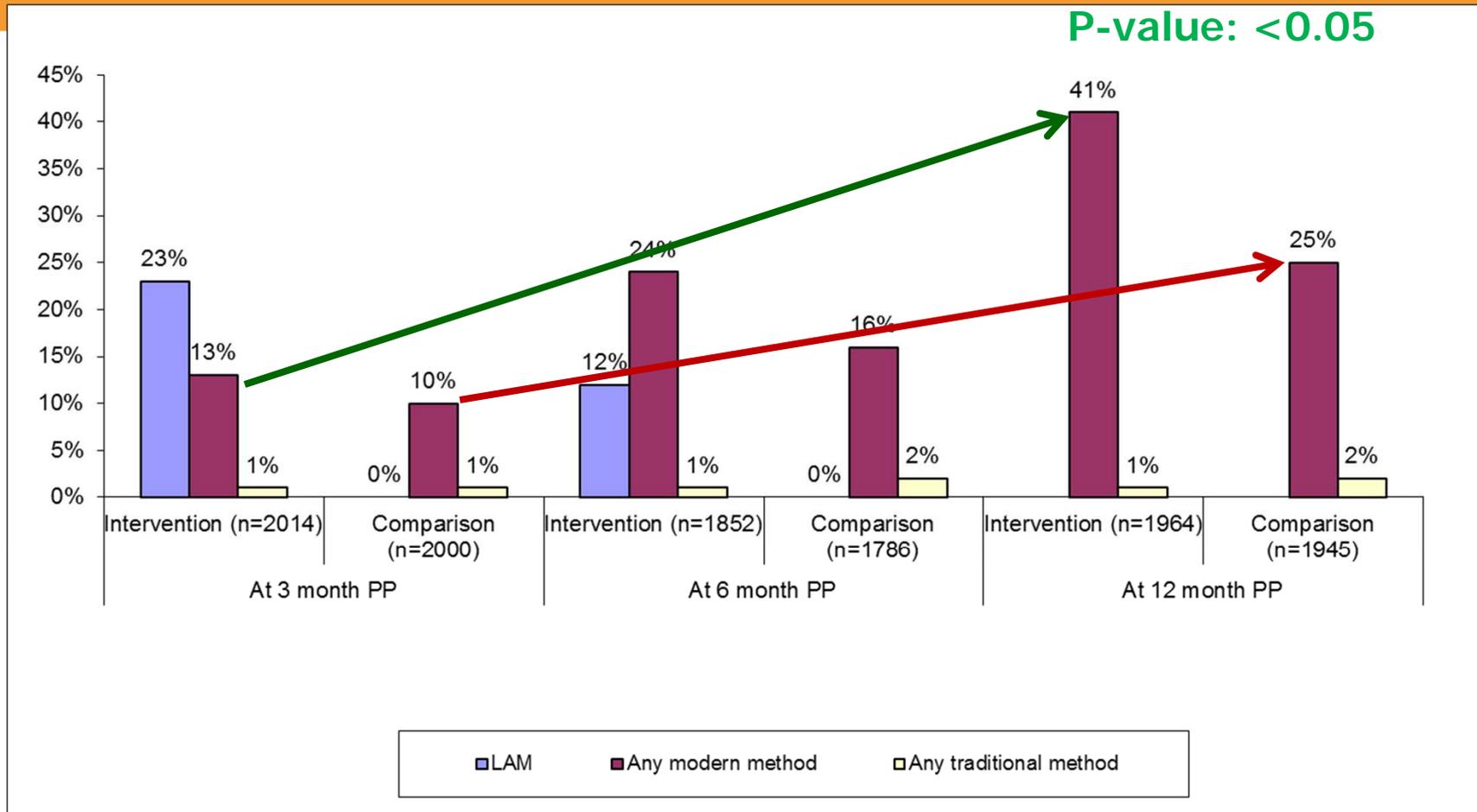
Ever Used Contraceptive Method



Exposure to Communications Materials and Community Activities

	Intervention		Comparison	
	3 Months Postpartum	6 Months Postpartum	3 Months Postpartum	6 Months Postpartum
Exposure to program communication materials:				
Birth spacing pamphlet	90.6	94.2	1.0	0.3
Leaflet on postpartum care	90.2	94.4	0.2	0.2
Leaflet on LAM	90.5	94.5	0.1	0.2
Community mobilization meeting attendance:				
By study participant (mother)	78.2	86.5	0.1	0.1
By her husband	21.0	25.8	0.0	0.1
By her mother-in-law	23.3	29.0	0.1	0.0
Note: Among women with a surviving infant				

Contraceptive Use Rate at 3, 6 and 12 Months Postpartum by Study Arm



13%, 24% and 41% of women at 3, 6 and 12 month PP used any modern method in intervention arm compared to 10%, 16% and 25% in comparison arm

Contraceptive Use at 12 months Postpartum Among Women With a Surviving Infant by Study Arm

	Intervention %	Comparison %
Pill	20.3	10.6
Condom	9.7	3.3
Injectables	7.8	9.1
IUD/Implants	1.2	1.4
Sterilization	1.9	0.9
Withdrawal/ abstinence	1.2	1.8
Any modern method user	40.9	25.3
Any method user	42.1	27.1

Method Source Among Users at 12 Months PP

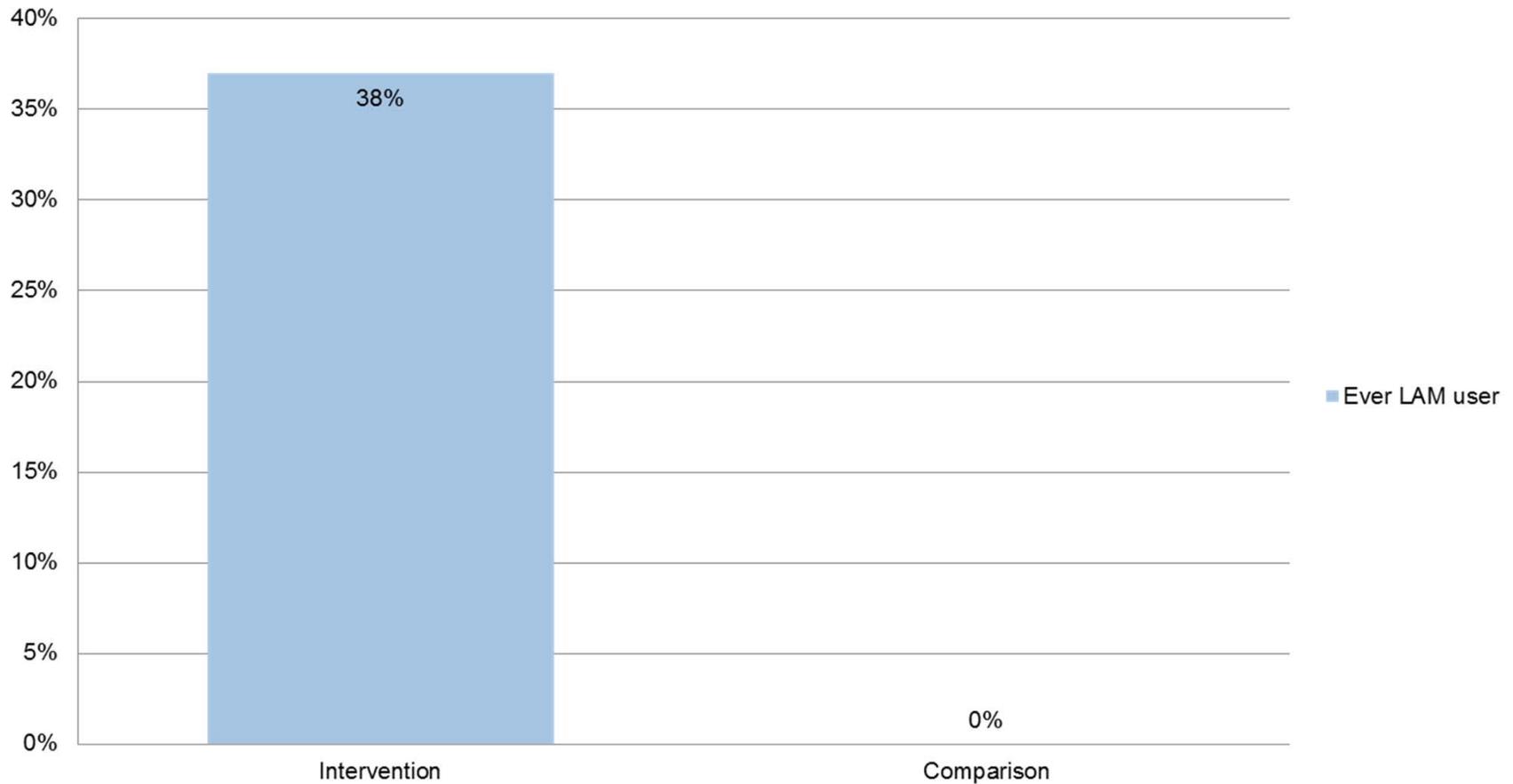
Source	Intervention		Comparison	
	Pills %	Injectables %	Pills %	Injectables %
GOB facility or provider	4.8	52.3	37.2	77.8
NGO facility or provider	3.0	39.9	2.4	9.7
Pharmacy or shop	14.3	6.5	58.9	11.9
CHW	77.1	0.0	1.5	0.6
Other	0.8	0.7	0.0	0.0

Top 10 Reasons for Non Use at 12 month PP by Study Arm

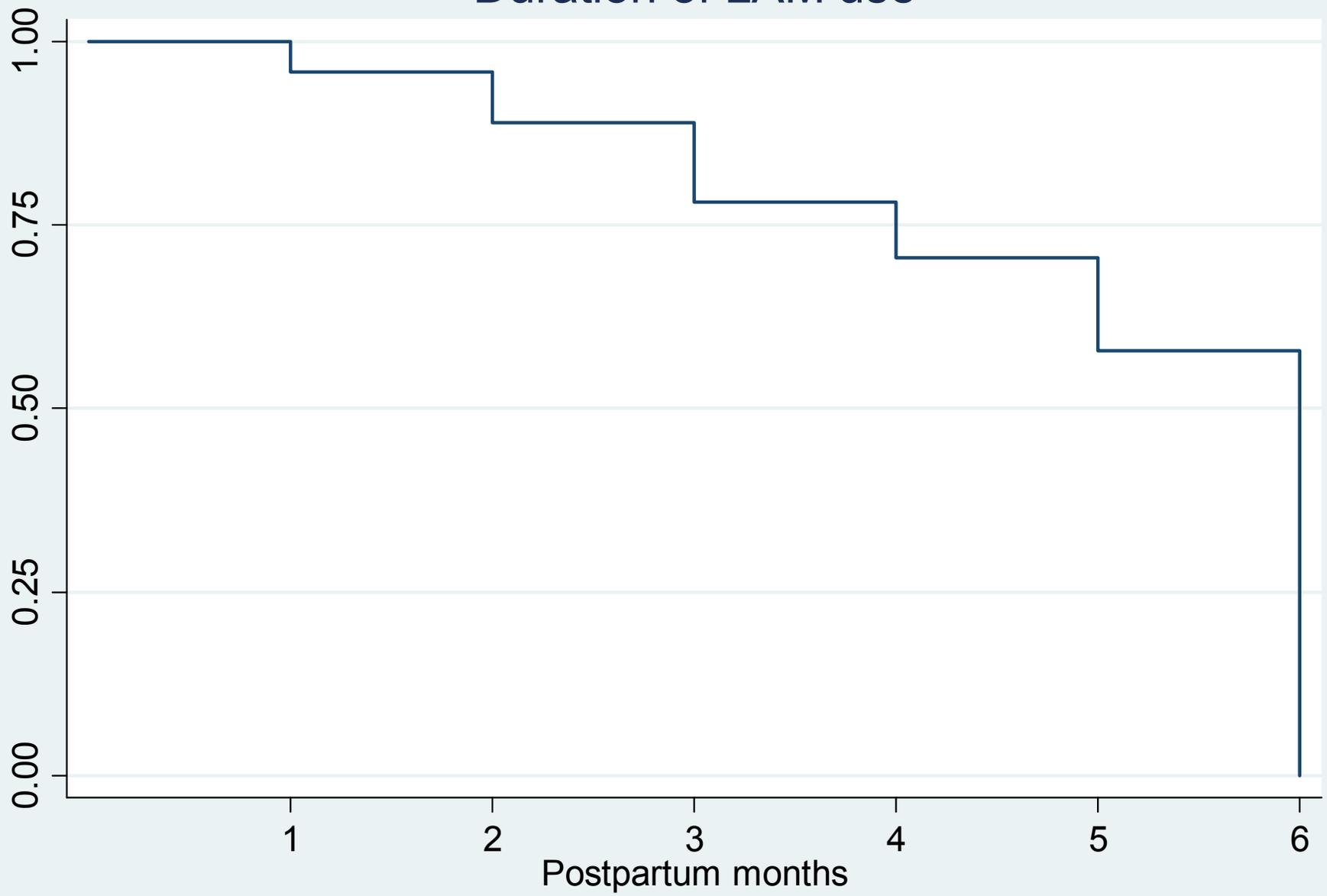
Reason Non-use	Intervention %	Comparison %
Husband abroad	43	13
PP amenorrhea	20	33
Husband disapproves	14	17
Wanted pregnancy	14	12
Religious prohibition	8	11
No suitable method	6	17
Health concern	5	7
Dislike	3	4
Family members disapprove	2	10
Infrequent sex	2	3

Multiple responses

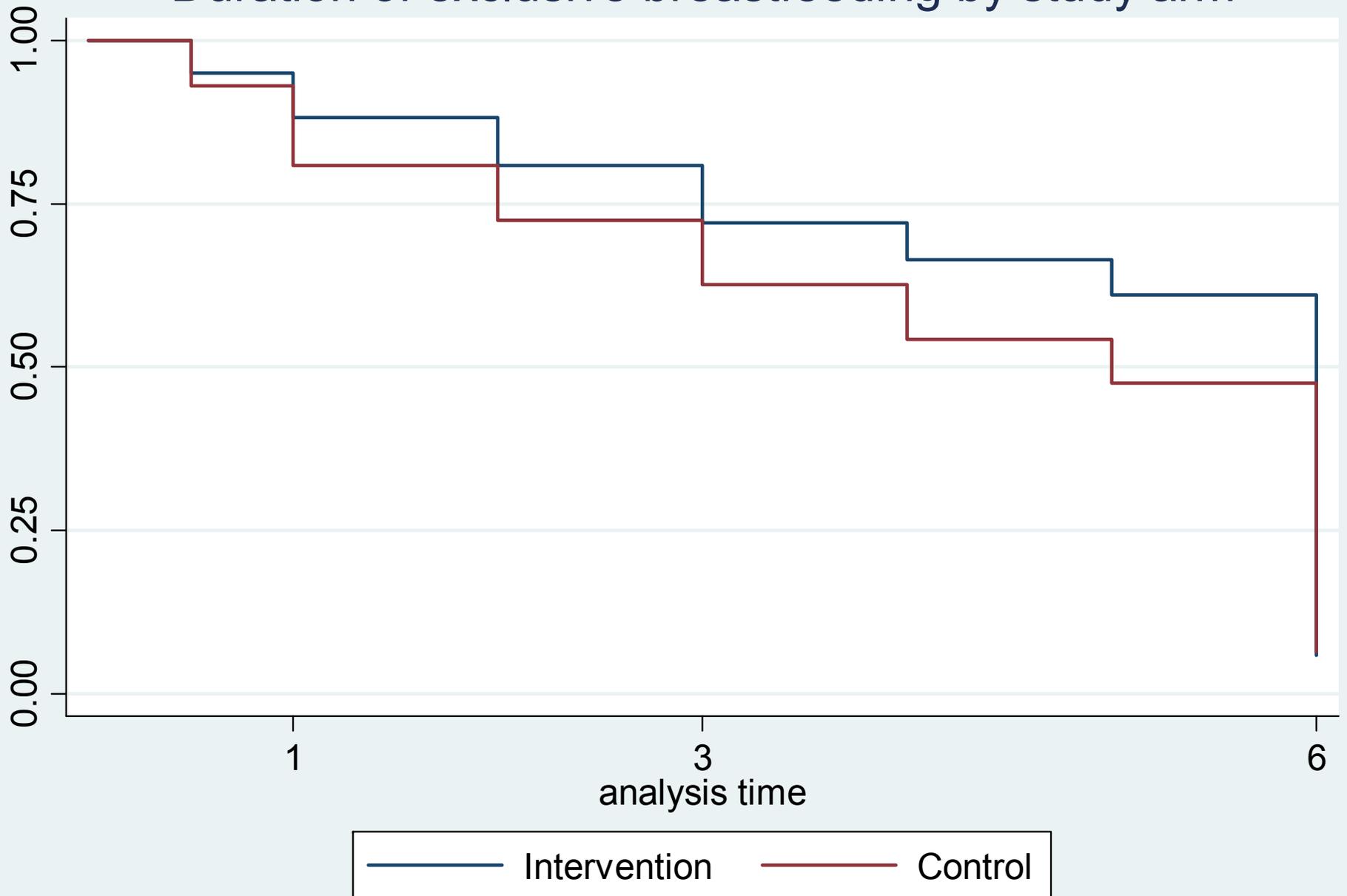
Ever LAM User by Study Arm



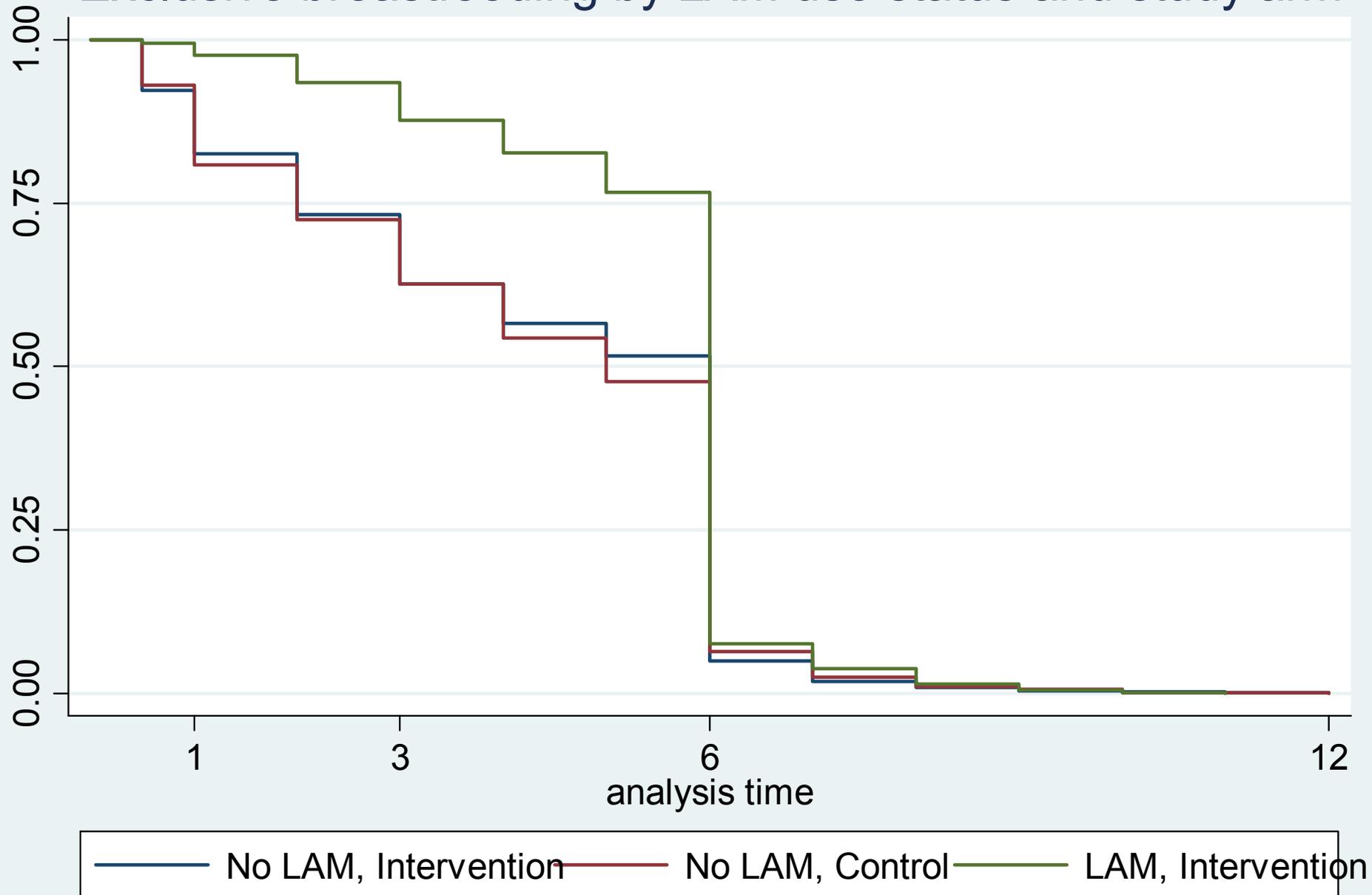
Duration of LAM use



Duration of exclusive breastfeeding by study arm

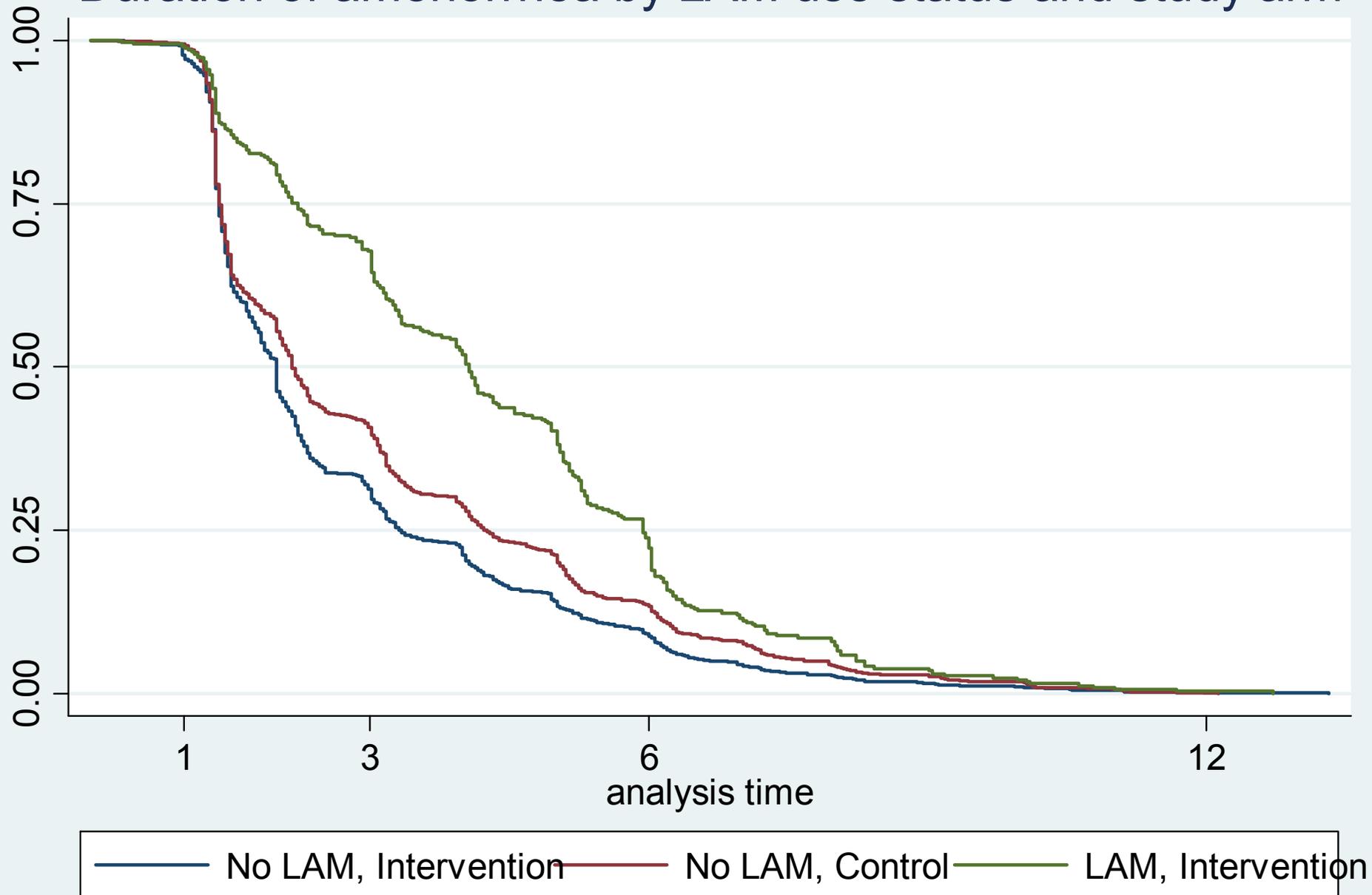


Exclusive breastfeeding by LAM use status and study arm



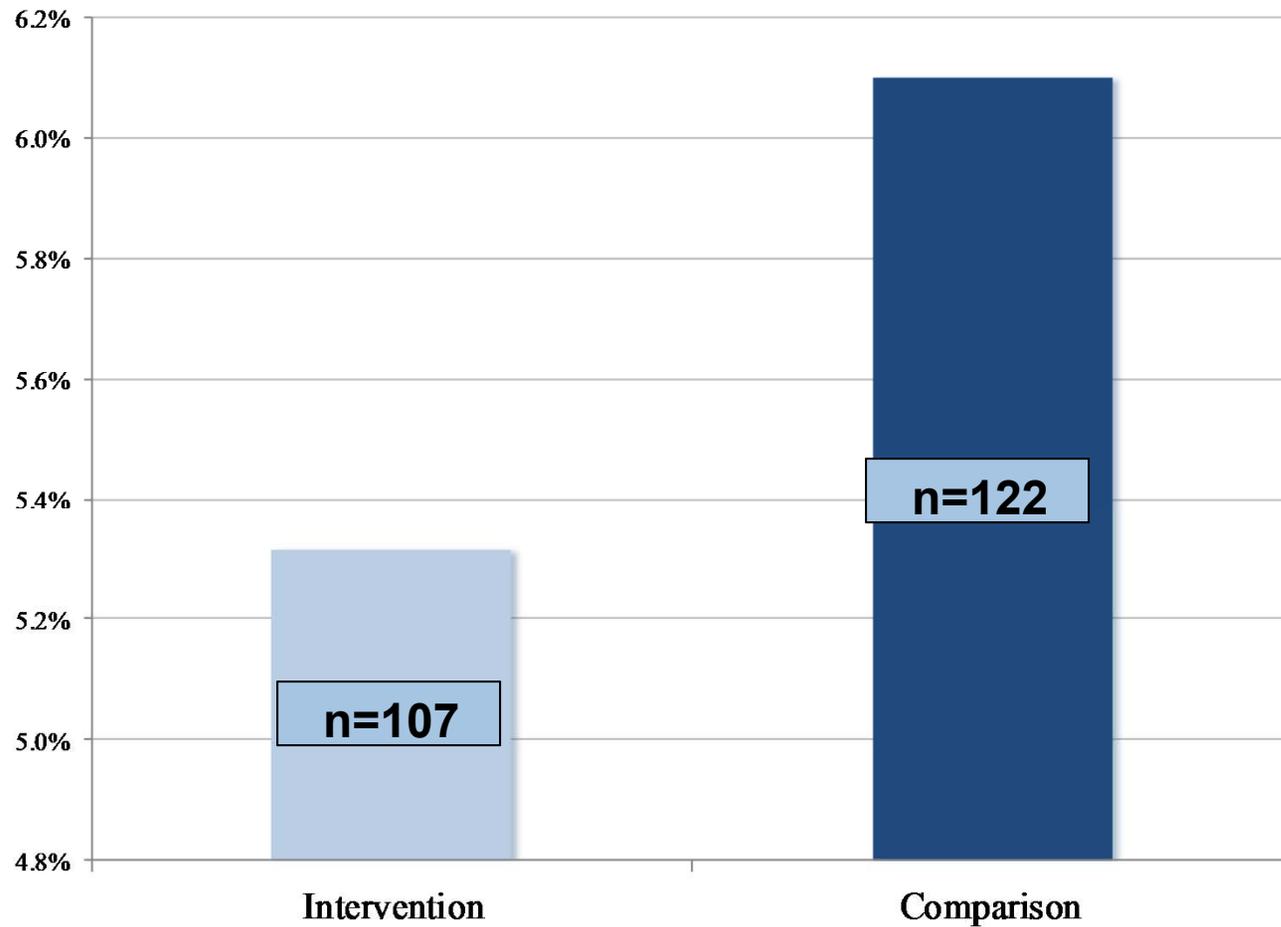
***P < 0.001**

Duration of amenorrhea by LAM use status and study arm

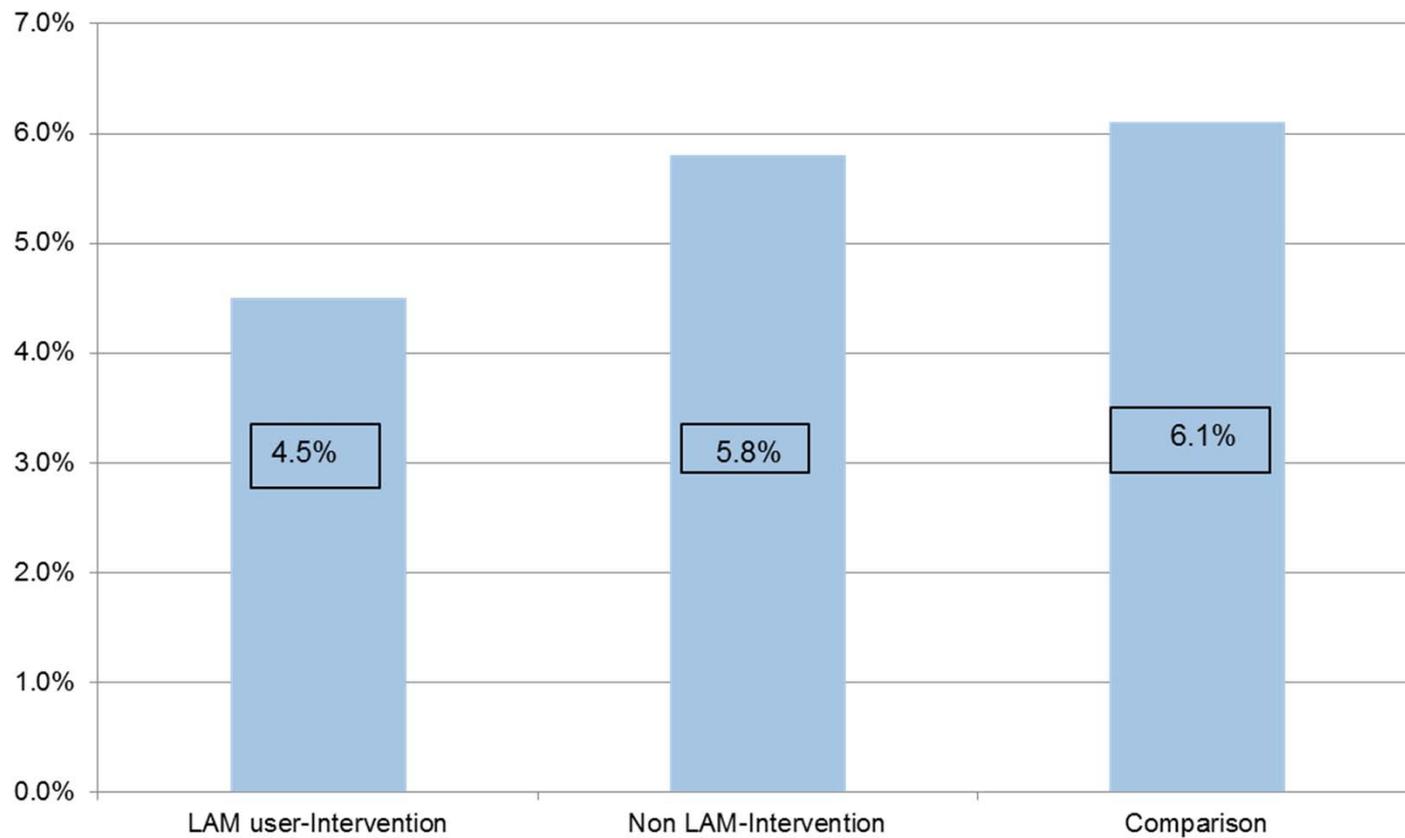


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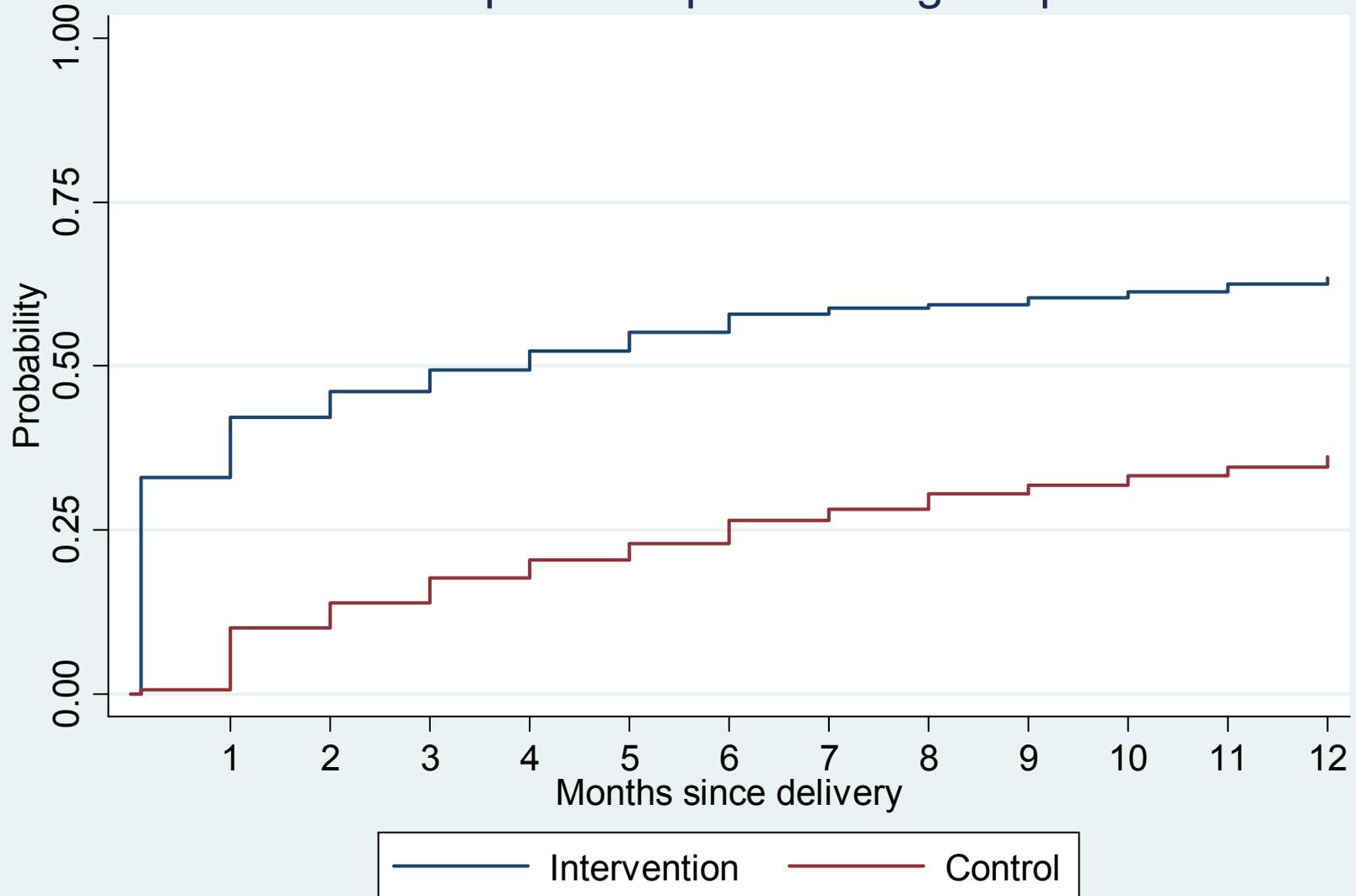
Pregnancy Rate at 12 month PP by Study Arm



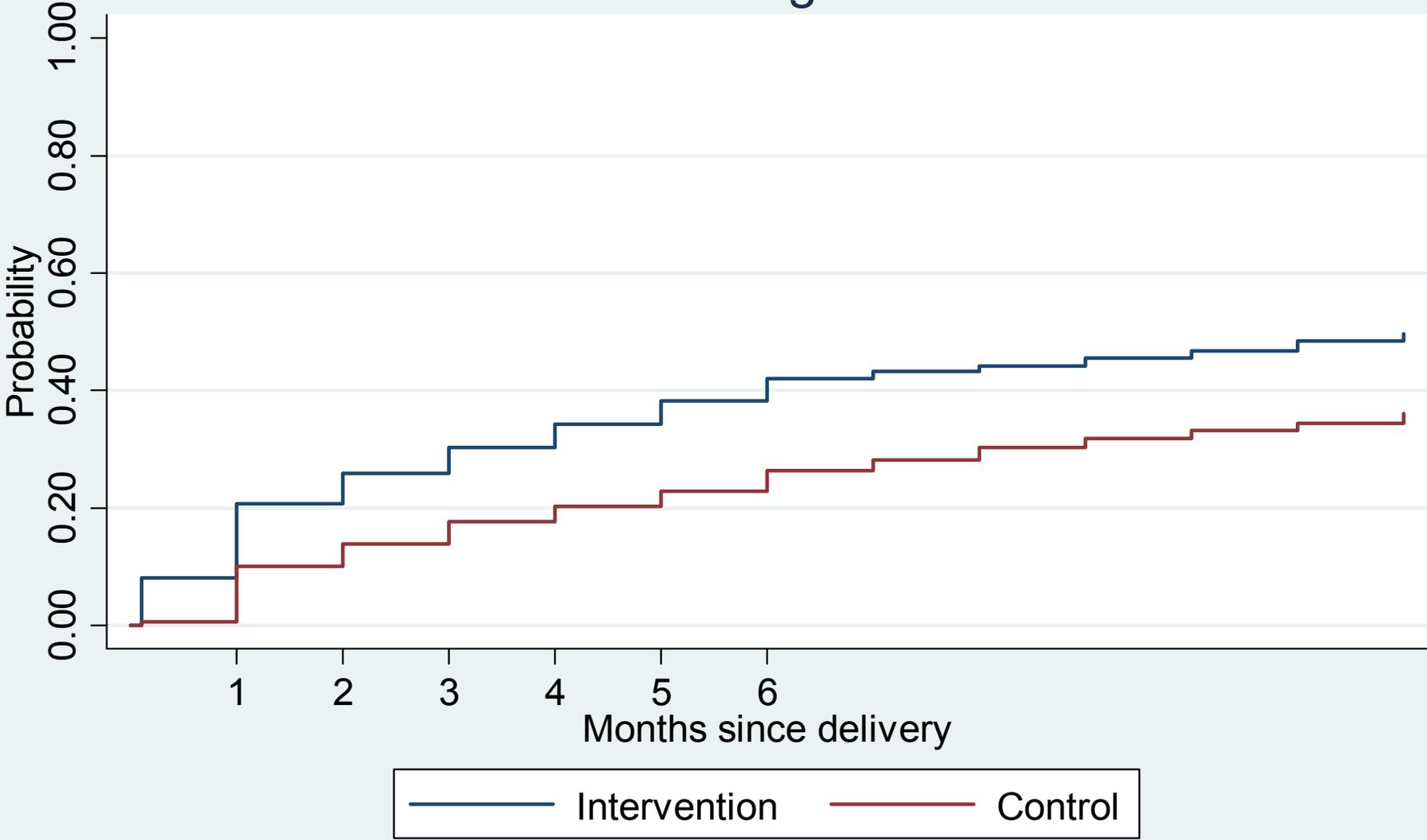
Pregnancy Rate by LAM User and Arm



Contraceptive adoption during PP period



Contraceptive adoption during PP period excluding LAM

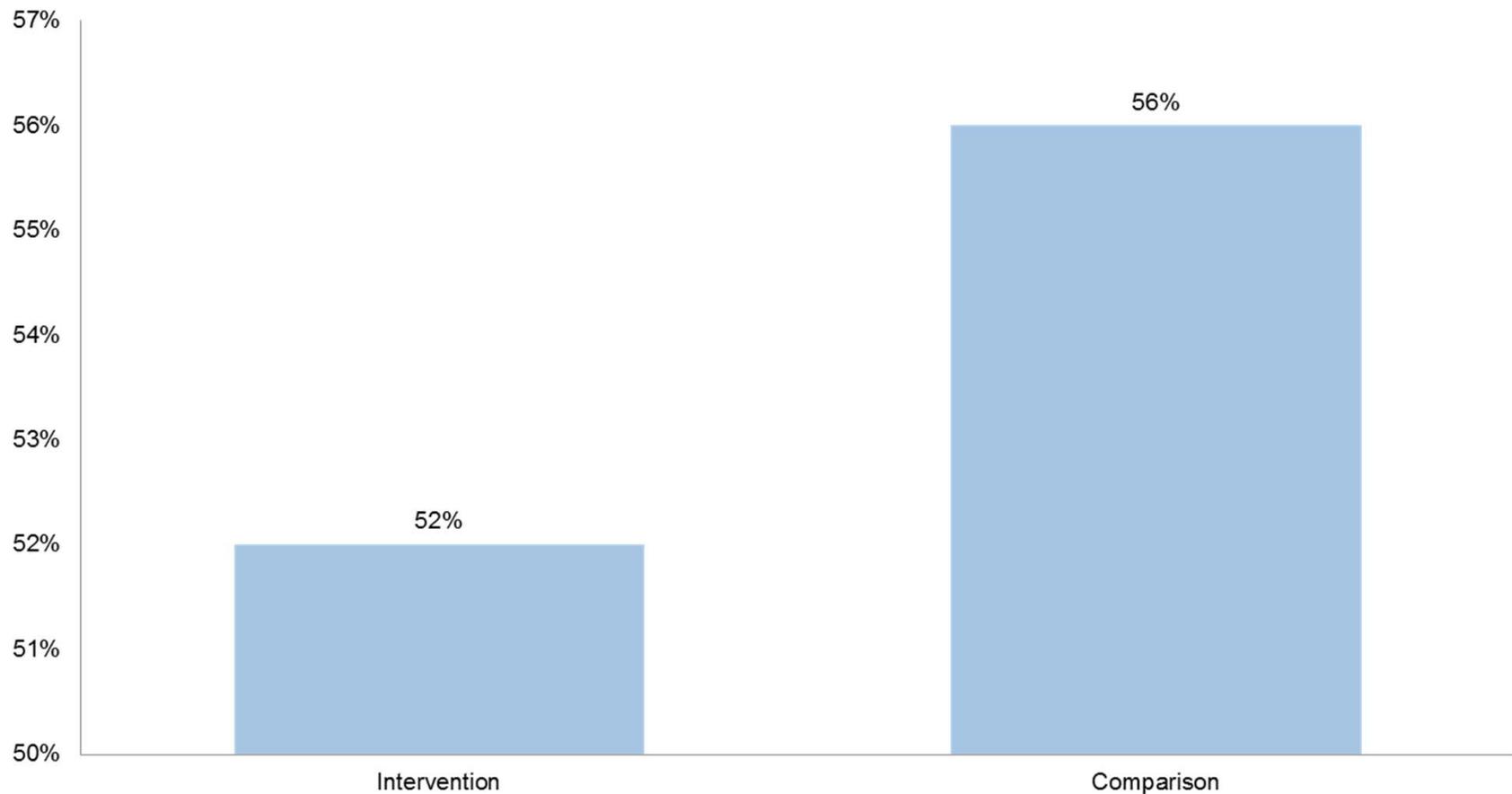


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Integration with MNCH Services

Antenatal Care at Baseline by Study Arm



Delivery Care of Index Pregnancy by Study Arm

	Intervention	Comparison
Home delivery	89.5%	91.3%
Assistance during delivery		
TBA/TTBA	79.0%	79.3%
Nurse/Midwife/Paramedic/FWV	8.6%	9.4%
MBBS doctor	9.6%	6.2%

Newborn Care by Study Arm

	Intervention	Comparison
Timing of wrapping after delivery		
<10 min	50.4	44.1
≥10 min	31.8	53.2
Initiation of Breastfeeding		
<30 min	56.6	46.8
≥30 min	40.9	52.4
Mean ± SD	66.2 ± 156.3	55.4 ± 144.6



Lessons Learned & Next Steps

Lessons Learned

HFS demonstrates

1. The feasibility of integration of FP within a community-based MNH program.
2. The effectiveness of the model in increasing modern method use.
3. No notable negative effect on the delivery of MNH services.
4. The promotion of LAM had a positive effect on the duration of exclusive breastfeeding.

Scaling up

- MaMoni- FP is now included as a key element including community-based distribution
- Myer Hashi- PFP approach included
- NGO
- Govt programs- FWA home visits
- Urban model- initially developed in Sylhet, but consider applying in Dhaka