

Optimal Birth Spacing Program: Operational Research in Mozambique, 2004-2005

Elvira Beracochea
Nina Pruyn

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Advance Africa Project
Management Sciences for Health
4301 North Fairfax Drive, Suite 400
Arlington, Virginia 22203
Telephone: 703-310-3500
www.msh.org



4301 N. Fairfax Drive, Suite 400
Arlington, VA 22203
Tel: (703) 310-3500
Fax: (703) 524-7898
www.advanceafrica.org

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Optimal Birth Spacing Program

Operational Research in Mozambique

2004-2005

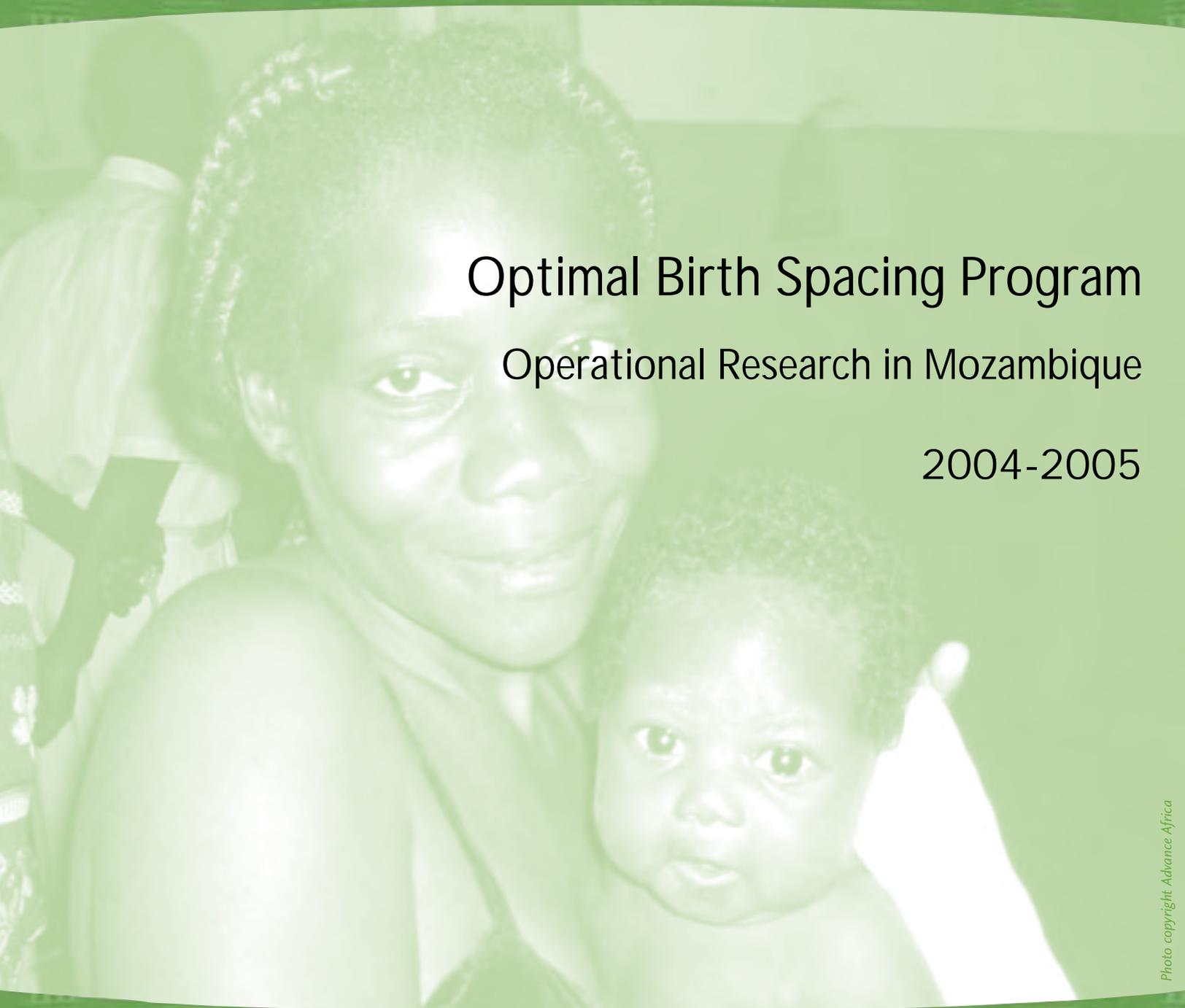


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Optimal Birth Spacing Program: Operational Research in Mozambique

End of Project Report
2004-2005

Advance Africa
4301 North Fairfax Drive, Suite 400
Arlington, Virginia 22203
Tel: (703)310-3500 ♦ Fax: (703)524-7898

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Working to improve the health and well-being of African families through strengthened reproductive health and family planning services

4301 North Fairfax Drive, Suite 400

Arlington, Virginia 22203 USA

E-mail: npruyn@advanceafrica.org

Website: www.advanceafrica.org

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List of Abbreviations

ACS	Agente Comunitario de Saude
AIDS	Autoimmune Deficiency Syndrome
ALRI	Acute Lower Respiratory Infection
ANC	Antenatal Care
CA	Cooperating Agency
CLC	Community Leader Councils
DDS	Direccao Distrital de Saude (District Health Department)
DHS	Demographic and Health Survey
DPS	Direccao Provincial de Saude (Provincial Health Department)
FP	Family Planning
HIV	Human Immunodeficiency Virus
HSDS	Health Service Delivery Systems
IEC	Information, Education, and Communication
IUD	Intrauterine Device
LAM	Lactational Amenorrhea Method
LQAS	Lot Quality Assurance Sampling
MCH	Maternal Child Health
MSH	Management Sciences for Health
MTCT	Maternal to Child Transmission of HIV
MOH	Ministry of Health
NGO	Nongovernmental Organization
OBS	Optimal Birth Spacing
PPC	Postpartum Care
PVO	Private Voluntary Organization
RH	Reproductive Health
TBA	Traditional Birth Attendants
STC	Save the Children
STI	Sexually-Transmitted Infections
VCT	Voluntary Counseling and Testing
WV	World Vision

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Finally, we want to thank all the Mozambican activists and families that work so hard to improve their lives and their communities. They opened their doors to us and to this new OBS information. Thanks for your optimism, enthusiasm and partnership. We dedicate this report to you all.

Executive Summary

In Mozambique, child and infant mortality rates are almost three times higher when the interval between births is less than 24 months (DHS 2003). More than half of the births take place less than three years apart. An interval of three to five years between births is considered optimal birth spacing because it is associated with improved child and maternal survival. The Optimal Birth Spacing project (OBSP) was part of a strategy to reposition family planning (FP) in Mozambique through the promotion of optimal birth spacing intervals and expand FP use. The OBSP was designed to evaluate the feasibility of an intervention based on the current knowledge of the community, the health providers, families and the women themselves about the benefits of optimal birth spacing and the risks of high maternal and child mortality related to short intervals.

The Advance Africa Project (AA) worked with the FRONTIERS Program, the Health Communication Partnership, Save the Children and World Vision to assist the MOH of Mozambique to implement this project in collaboration with the Provincial Directions of Health in Nampula, Zambezia, and Gaza. The implementation of the OBS project lasted ten months, from August 2004 to May 2005, and was conducted in three phases to facilitate Advance Africa's technical and financial assistance. STC and World Vision implemented phase one. Only World Vision implemented phases two and three due to limited funds and time available. Advance Africa did not have an office in country by the end of phase one and assistance was limited to email and phone calls, and one visit in March to assist World Vision with project monitoring. This report describes the three phases and presents their findings.

It is recommended that USAID/Mozambique, MOH and World Vision use the results of this project to improve the national family planning program through increased knowledge about the benefits of birth intervals of 3 to 5 years, and the risks of short intervals. The results reported here indicate the feasibility of rapidly increasing the number of people that express their decision to space for an optimal interval through the use of the existent social networks. This report makes recommendations on various implementation issues to be considered for continuing and scaling up the OBSP.

Background

While the benefits of birth spacing on maternal health have long been known, recent analyses using data from the demographic and health survey (DHS) have drawn attention to the significant impact birth spacing has on child health as well. Birth spacing intervals longer than 36 months have the potential to decrease maternal mortality by 20%, infant mortality by 24% and child mortality by 34% (Rustein 2003, Conde-Agudelo 2002, Zhu 1999). The health benefits of birth spacing make family planning services an essential part of child survival and safe motherhood programs.

This report describes the development and evaluation of the feasibility of an intervention to increase knowledge about the benefits of optimal birth spacing intervals and the risks of short intervals and the reported intention to space births in one community in Mozambique.

Prior to stating the OBS project reported here, in December 2003, the Advance Africa Project had conducted a workshop with NGO/PVOs working in Mozambique to create a working group and assist them to integrate OBS activities in their programs. World Vision (WV) and Save the Children (STC) accepted to initiate activities that promoted OBS with Advance Africa's support. In 2004, STC and WV trained community health workers in family planning counseling and distribution of pills and condoms and Advance Africa trained all the health staff in Nampula, Gaza and Zambezia provinces in FP/RH.

Later in 2004, Advance Africa collaborated with the Health Communication Partnership (JHU/HCP) team in Mozambique. This team was conducting research to develop messages for its OBS communication strategy. Advance Africa and JHU/HCP also worked together to ensure that all the health staff in the target provinces had received training in counseling and interpersonal communication. Advance Africa also assisted the Ministry of Health of Mozambique to promote birth spacing and family planning as a health intervention, and assisted to develop a new FP/RH policy that emphasized the promotion of 3 to 5 years as the optimal inter-birth interval.

In consultation with all stakeholders, Advance Africa developed a protocol to assist World Vision and Save the Children to implement the OBS promotion project, a community-based intervention in Zambezia, Gaza and Nampula, where the two PVOs already had community-based programs funded by USAID/Mozambique. Advance Africa also worked in collaboration with the Population Council, through its FRONTIERS Program, which provided technical input, analyzed the DHS 1997 and 2003 data and assisted with project design.

The implementation of the OBS project lasted ten months, from August 2004 to May 2005, and was conducted in three phases to facilitate Advance Africa's technical and financial assistance. STC and WV implemented phase one in three target provinces. Because of limited funds and time availability, only WV implemented phases two and three. Advance Africa had completed its program in Mozambique and did not have an office in country by the end of phase one (September 2004) so assistance was provided by emails, phone calls, and one visit in March. This report describes the three phases and presents their findings.

The Problem

In Mozambique, the 1997 DHS identified three child and infant mortality patterns coinciding with the duration of the birth interval. Child mortality for each of these birth intervals was as follows:

- 308 per 1000 live births for children born less than 24 months apart
- 199 per 1000 live births for children born between 24 and 36 months
- 124 per 1000 live births for children born more than 36 months apart

When infant mortality is compared, the same pattern emerges:

- 212 per 1000 live births for infants born less than 24 months apart
- 125 per 1000 live births for infants born between 24 and 36 months
- 75 per 1000 live births for infants born more than 36 months apart

Maternal mortality in Mozambique is reported to range from 980 per 100,000 live births (Population Reference Bureau, 2002) to 1,100 (UNICEF 1999). There is evidence from Latin America (Conde-Agudelo 2000) that shows that the risk of pre-eclampsia, anemia, hemorrhage and death is as much as 150% higher when the birth interval is less than 15 months. The relation of maternal morbidity and mortality with birth interval has not been studied in Mozambique yet, but is suspected to be high. The availability of essential obstetric care is still a challenge in most provinces, and the need to be prepared for a safe delivery and possible obstetric emergencies is another reason to time the first pregnancy and to optimally space subsequent ones.

The factors that affect birth interval and maternal and child health in Mozambique are multiple: ranging from the age of the mother to access to family planning services and availability of contraceptives. The age of the mother and whether the previous pregnancy ended in a stillbirth also determine the decision of when to have another baby. Adolescent mothers are particularly at risk because they tend to have children with shorter intervals and with different and unstable partners, particularly in urban areas. Adolescents also have a 30% higher risk of institutional maternal mortality ratio than non-adolescents (Granja 2001). Access to youth friendly health services is increasing but availability and quality are limited, and also influence the adolescent's ability to space births. Youth friendly services also suffer of staff and supplies shortages as the rest of the country's facilities.

Health system factors influencing use of modern family planning methods include the competence of the health providers to counsel on the health benefits of birth spacing and assist families in the decision-making process, the presence of services, the continuous supply of commodities, behavior change and communication programs and the existence of community-based providers. In the case of Mozambique, the health system has made remarkable improvements. In Nampula and Zambezia, most providers have been trained in family planning and counseling skills through Advance Africa and JHU/HCP projects, and a number of districts have community health workers (activistas) trained by PVO/NGOs funded by USAID/Mozambique. The *Activistas* provide counseling and referrals, and supply pills and condoms. In addition, a new FP/RH policy was developed and includes promotion of optimal birth spacing.

What else can be done to enable families to achieve optimal birth intervals? In Bangladesh, the existence of social networks that support the adoption of new behaviors have been reported to result in longer contraceptive use (Kincaid 2000), and could be the intervention that could increase knowledge about the risks of short birth intervals and how to access and use modern contraception to achieve optimal birth intervals. In order to design an intervention based on a social network approach, the Advance Africa project assisted WV and STC to conduct focus group discussions and in-depth interviews to learn about

what women and their families know about birth spacing, and what social networks they participate in. This information was used to test the feasibility of using the local networks to promote OBS and through the most appropriate “messengers.”

Introduction

For families to implement their decision to space the birth of their next child for an optimal interval of three to five years, they need to learn about their contraceptive choices. The knowledge about contraceptive methods has increased lately (KPC survey 2004) but the reported use is still low. Contraceptive use in Mozambique varies by province from about 50% in Maputo city to less than 10% in Cabo Delgado Province (Figure 1). According to the 2003 DHS, on average, 83.3% of the population uses no contraceptive method, 11.6% use modern methods and 5.1% use traditional methods, and intervals between births are reported to be longer than 24 months in average by over 80% of the women (table 1).

Figure 1. Contraceptive Use by Province in Mozambique, DHS 2003

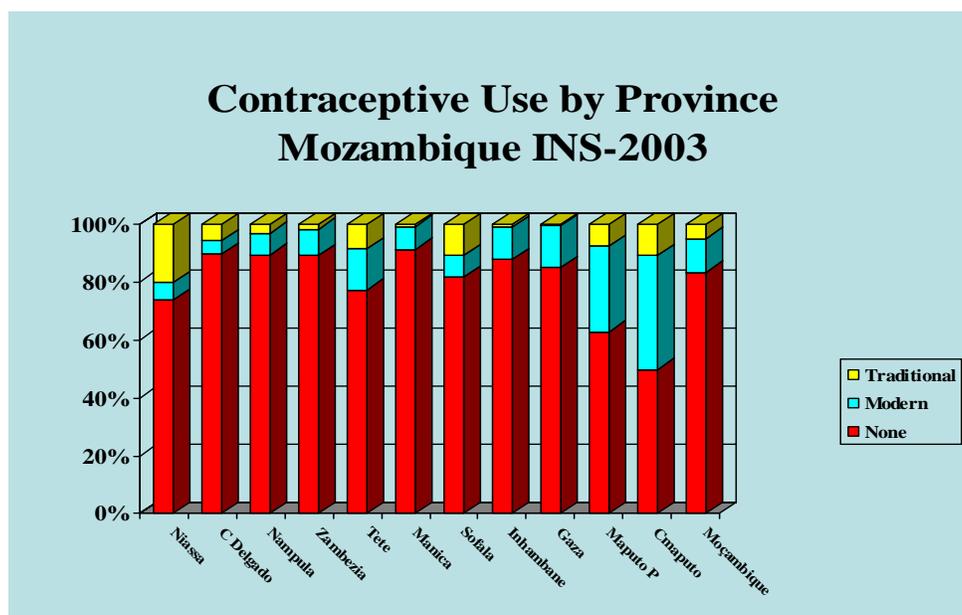


Table 1. Birth spacing intervals by province in Mozambique, DHS 2003

	Niassa	C Delgado	Nampula	Zambezia	Tete	Manica	Sofala	Inhambane	Gaza	Maputo P	Maputo C	Moçambique
<24 mo	19.9	18.4	18.9	20.5	19.2	10.6	15.3	11.1	10.8	8.1	10	16.5
25-35 mo	41.2	41.4	41.4	34.3	43	41.8	41.3	37.5	37.5	28.9	28.3	38.9
>35 mo	38.8	40.2	39.7	45.2	37.7	46.6	43.4	51.4	51.7	62.9	61.7	44.6

In regard to birth spacing, the 1997 Mozambique DHS reported that 19% of women gave birth with less than 24 months of spacing between live children. By 2003, the national average was 16.5%. Additional analysis of the DHS data was required to learn more about the characteristics of those that achieve optimal birth intervals and those that do not. The FRONTIERS Program conducted this analysis and

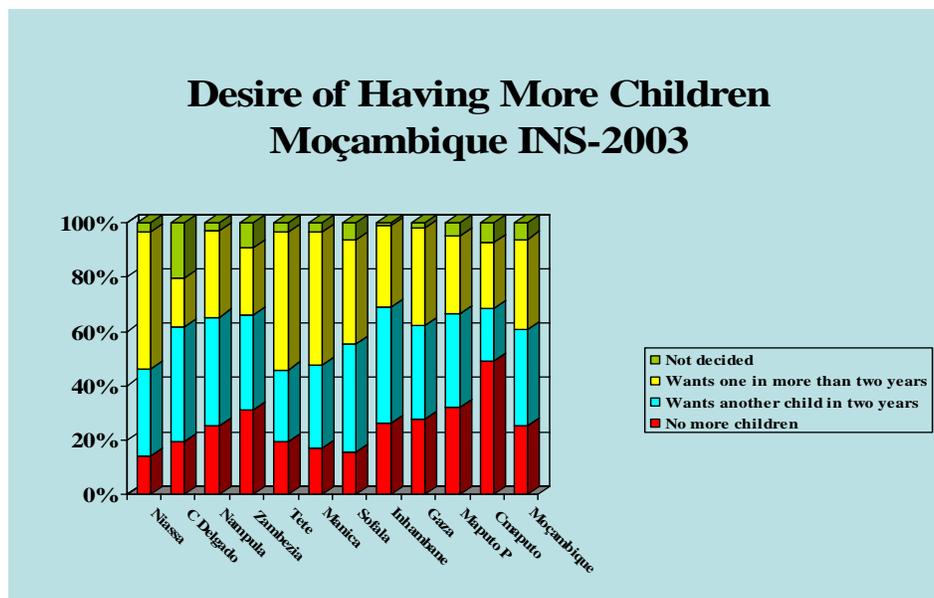
found that although the national average for birth spacing was over three years (3.62), more than half the women had intervals less than three years, a third between three and five, and a little less than a sixth over five years (RamaRao, 2005). This analysis was able to find that more rural women (35%) were willing to space for three to five when compared to urban women (31%).

FRONTIERS also found that the shortest median interval occurs among younger mothers. Three quarters of the 15-19 women were likely to have a short preceding interval compared to 58% of the 20-24 year olds, 52% of the 25-29 year olds and 47% of those 30 and older. Working mothers are less like to have short interval, though.

Age and rural or urban living helped us target groups but there were other more proximate variables that influence birth intervals. Reproductive aspirations and behaviors were most important for our type of project. FRONTIERS found out that families with few children tend to have short intervals. This association was statistically significant in Nampula where 79% of the families with few children had short intervals compared to 53% of the families with two or more or 57% of those with five or more. Breastfeeding also had influence on birth intervals, for example, 48% of the women who did not breastfeed had short intervals compared to 39% of those that breastfed for one to six months.

The desire of having children at all ages is high (Figure 2) in the target provinces. In Nampula, 38% of the women reported to desire another child in two years and 30% in more than two years, while in Zambezia, the response was 30% and 22%, and in Gaza 34% and 35% respectively. Families need knowledge to use contraceptive to space the births of their desired children to ensure optimal chance of maternal and child survival and not perceive contraceptives as a way to limit the number of children.

Figure 2. Desire of Having More Children by Province in Mozambique



Social and religious behaviors also influence intervals. In the Nampula province, couples report to be separated until the child can walk. At that time, they present themselves for purification before their religious leader and are allowed to resume sexual relations. Religious networks would be tapped to support the adoption of optimal birth intervals. The OBSP would test the feasibility of building on local

religious networks to support those practices that favor longer intervals such as postpartum abstinence, and prolonged breastfeeding.

Social and health services need to address the need of young mothers to be informed to time their first pregnancies and space subsequent ones. Mother's median age at first pregnancy is 19 (DHS 2003). The incidence rate of low birth weight and maternal complications is higher in this group. This group is particularly at risk because they marry young in rural areas or have unstable unions in urban areas, and tend to have shorter birth intervals. Adolescents also have a 30% higher risk of institutional maternal mortality ratio than non-adolescents (Granja 2001). The OBS project tested the feasibility of using the local networks to communicate delaying early marriage and how to best meet the special birth spacing needs of this group of young mothers.

In sum, it was expected that the OBSP would promote OBS and target younger couples who are at greater risk and contribute to reduce maternal and child mortality and increase FP use in the whole community. Although the short duration of this intervention would not allow us to measure its impact, the present project would demonstrate the feasibility of implementing community-based interventions in favor of optimal birth intervals in the context of ongoing community-based programs.

Purpose

The overall purpose of this intervention was to test the feasibility of increasing reported knowledge and intention to space births in Mozambique through local networks and the work of local PVOs.

Objectives

1. Identify the current level of knowledge regarding the risks and benefits of birth intervals of less than 3 years.
2. Identify how families and individuals make decisions about how long it is appropriate to space births and what their current intentions are to space births and desired number of children.
3. Identify reported reproductive health practices for spacing children.
4. Identify the factors that influence desired number of children and birth spacing practices
5. Identify social networks available in the study communities.
6. Design the intervention to strengthen the local networks to disseminate optimal birth spacing messages and support birth spacing decisions
7. Determine if using social networks is feasible to improve knowledge of birth spacing issues in Mozambique
8. Determine if improved reported knowledge of birth spacing influences couples' decision-making and leads to report the intention to space births 3 to 5 years, i.e. use modern contraception for 27 to 51 months, especially among post partum couples/women
9. Determine if reported intention to space births at least 3 years apart leads to increased reported use of modern family planning

Feasibility

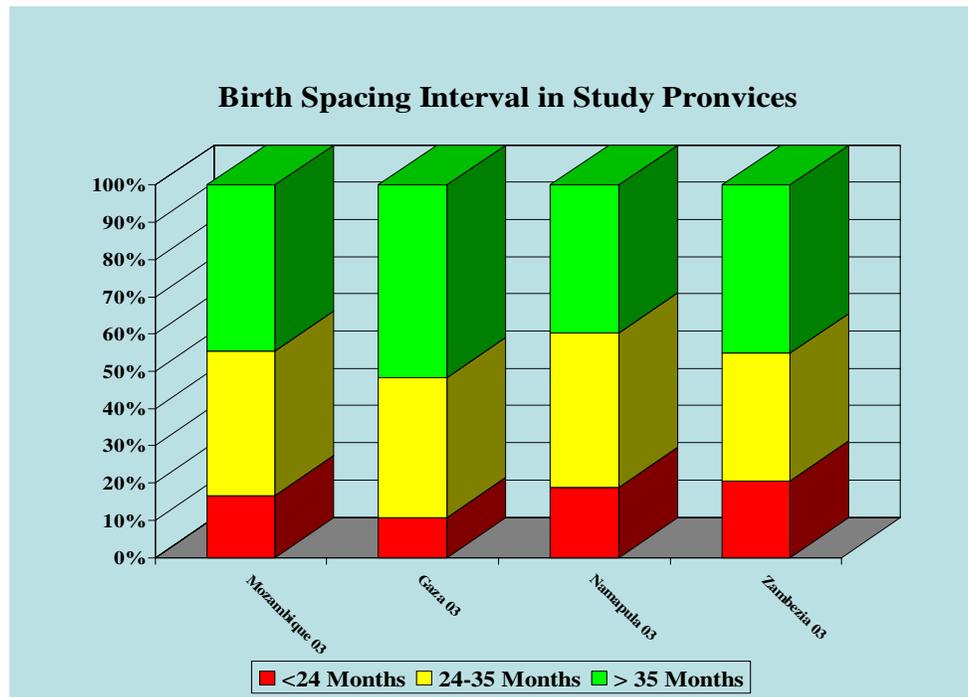
For this study, feasibility was defined as the ability of the intervention to demonstrate that is technically practical to meet the above objectives, operationally implementable within the resources and capacity available in the district, economically affordable, and culturally acceptable. To evaluate the feasibility of this intervention, the main indicator measured reported intent to space and reported FP use behavior during the six months of intervention, but it was not be able to measure continuation for 27 months or rates of achievements of optimal intervals among the study communities.

- Feasibility indicators: Is the intervention technically implementable, practical, acceptable, and affordable?
 - Was the intervention implemented as planned? What was changed and Why?
 - Were the objectives achieved? How? Why not?
 - What resources were required? Were these available or additional?
 - Did the communities accept the intervention? Was it considered appropriate? Were they satisfied with the intervention? Were they pleased to participate in this intervention? How would they improve the intervention? Would they recommend other villages to have a similar intervention? Would they like to help neighboring villages to start similar interventions?
 - Was the District Health Team satisfied with the intervention? Did the PVO consider the practical, worthwhile and affordable? What was the best part of the DHT/PVO collaboration?
 - What was the cost of the intervention? Is it feasible within the resources available? Would the MOH be able to replicate the intervention with similar results in the rest of the district or province? Would the community and or community leaders or business people finance part or all of the intervention?

Geographic Scope and Selection Criteria

According to the 2003 DHS, Zambezia and Nampula have higher proportion of women in the shorter birth interval group, while Gaza has fewer (red and yellow bars in Figure 3. The OBSP took place in three phases. STC conducted phase one in one community in Nampula and in one in Gaza, but did not conduct phases two and three due to lack of funds. WV conducted the three phases in one community in Zambezia.

Figure 3. Birth Spacing Intervals in OR Provinces.



The OBSP targeted a community in one district in each province.

Nampula: District selected: Nacala-Porto.
Zambezia: District selected: Gurue.
Gaza: District selected: Xai-Xai.

The choice of health districts was made by the Provincial Medical Director, the district health team, STC, WV, and Advance Africa based on a number of criteria:

- Interest of the Provincial and District Health Teams, demonstrated by creating a OBS Research Committee
- Presence of trained health workers
- Presence of trained community health workers
- Existence of a number of medium sized communities: 3,000 to 5,000 people

Methodology

This intervention consists of seven stages of which the first four have been completed (box 1). The intervention had three phases:

Phase One: Intervention design based on the findings of a rapid baseline of current knowledge and existent local networks. STC and WV conducted focus groups in the three communities.

Phase Two: Implementation of an intervention to improve reported knowledge of the benefits of optimal birth spacing, and of the risks of short intervals; and increased reported use of modern family planning methods with the reported intent to space the next birth for optimal interval. The intervention was preceded by a household survey to define the baseline. The survey was designed based on the finding of the focus groups in phase one.

Phase Three: Feasibility analysis to review the results of how the intervention took place and worked out.

Box 1. OBS Project Design Summary

1. **Repositioning:**
 - ❖ Sensitization Workshop
 - ❖ Communication Strategy
 - ❖ FP/RH Policy
 - ❖ OBS Protocol Development
2. **Phase One - Descriptive: Focus Groups in one community in Zambezia, one in Nampula and one in Gaza Provinces**
3. **Phase Two - Intervention: Using the Existing Social Networks in One Community in Gurue District, Zambezia Province. Implementing Partner: World Vision**
 - ❖ Baseline Population Survey
 - ❖ Monthly LQAS Monitoring Surveys
 - ❖ WV coordinator links and supports social networks
4. **Feasibility Assessment: Interviews and focus groups**
5. Gurue: Endline Survey and Effectiveness Assessment
6. Scaling up and Expansion to Nampula and Gaza
7. Evaluation

A. Phase One

Activities: May through September 2004

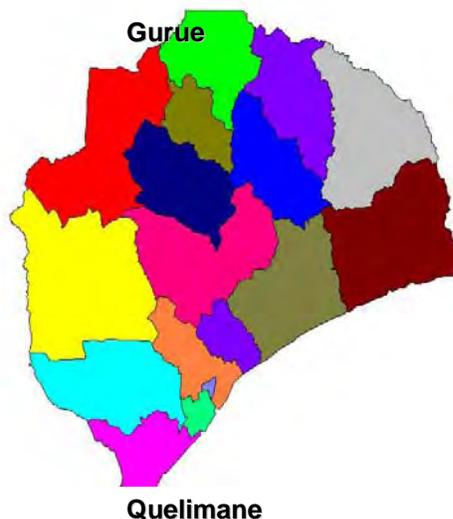
- Advance Africa assisted the MOH to create the “Optimal Birth Spacing” Committee to oversee the implementation of the intervention project the same at provincial/district level. The Committee selected the study communities.
- Advance Africa developed the focus group and in-depth interviews guidelines for the qualitative data collection. The qualitative data collection preceded and informed the preparation of the household survey in phase two.
- In each district, the intervention included one community, where the PVO worked. As the intervention design was focused on the community rather than facilities, the intent was to have communities with the best case scenario where services and trained providers were available, where community health workers distribute contraceptives, and where the new intervention was the only value added. Advance Africa worked with the PVOs to select the communities and inform and involve the local health authorities, including provincial, district and facility staff.
- Advance Africa provided sub-awards to STC and WV to conduct 30 focus group discussions, ten in each community, and various types of interviews with the key informant groups: health staff and community health workers (ACS), TBAs, school teachers, businesspeople, and religious and community leaders (annex 1).
- Advance Africa also provided the PVOs with the training and worked with staff from STC, WV and provincial directions for two months to assist with moderators’ training, data collection, recording and translation. In addition, Advance Africa analyzed the focus group discussions and interviews and produced a report. The report was translated into Portuguese for dissemination.
- In August, the Vice-Minister of Health launched an OBS communication campaign in Gurue District with the assistance of JHU/HCP, Advance Africa and other partners.
- Advance Africa disseminated the findings of this phase with all stakeholders in September 2004.
- During this phase, the FRONTIERS Program also conducted an in-depth analysis of the DHS 2003 data to study birth intervals and patterns (RamaRao, 2005). This analysis answered questions regarding the actual proportion of women in each birth interval, their use of various contraceptive methods and the birth intervals achieved by these women since their last delivery.

Phase Two

The intervention was to proceed in the following stages:

- i. Introduction: October –December
- ii. Settling in: January – February
- iii. Well-functioning: March- May

Figure 4. Zambezia Province and Gurue District



Activities: October 2004 through May 2005

- Based on the findings of phase one and funding available, one community was selected for intervention: Lioma Proper in Lioma Administration, in Gurue district of Zambezia province (figure 1). Lioma is about an hour's drive from Gurue City and has a population of 14,000 approximately. Electricity arrived in Lioma two days before the focus groups of phase one took place and it was the talk of the town. Just a few buildings have it, including the health center, school and police station. Gurue is about a 4 to 6 hour-drive from Quelimane, the Capital of Zambezia province, which is about a two hour flight from Maputo.
- Advance Africa provided World Vision with a sub-award for \$23,000 to implement phase two. This included the implementation of a household survey and the support of one field staff to link with the local networks in Lioma.
- Based on the findings of phase one and consultations with stakeholders, Advance Africa developed an operations manual to guide WV with its implementation.
- Advance Africa designed a handout to disseminate the MOH's OBS messages which had been developed in collaboration with JHU/HCP.
- It was observed that the population of Lioma was dissatisfied with the methods available and it was decided to include a new method to expand the mix available. The Standard Days Method (SDM) was selected because it is considered a natural method and it is easy to use. Advance Africa also translated the SDM training manual into Portuguese and trained the MCH nurse, Lioma Health Center Staff and WV staff on the counseling of the cycle beads.
- In September 2004 Advance Africa traveled to Lioma to work with WV staff, Lioma Health Center staff, and local *Activistas* to introduce the tools and approaches to engage the local networks.

- In December, WV recruited an OBS Network Coordinator, who worked with local networks to locate and mobilize opinion leaders (“link persons”) in each local network and to improve their interpersonal communication, counseling, and group leadership skills.
- The baseline had identified the local networks (women’s support groups, men’s groups, school-related networks, postpartum groups, religious networks, etc.). The Coordinator located volunteer link persons who are: a) centrally located within the social network, b) satisfied users of family planning and willing to promote it publicly, particularly 3-5 years, c) influential within the social network
- The coordinator assisted the link persons to provide the handout with the messages to share at various network group discussions which: a) met at the homes of local link persons or other venues at least once a month, b) discussed health and family planning issues, c) encouraged peer group support, d) counseled using the OBS handout, and e) referred to the Lioma health center for more information and family planning.
- Advance Africa monitored the diffusion of messages through social networks using Lot Quality Assurance Sampling (LQAS) in 19 randomly sampled households. This information was also used to inform the implementation and on how to best identify, reach and support social networks.
- Advance Africa and WV were in regular contact to follow and disseminate progress. WV prepared monthly phase two report and an end of project report.

Phase Three

This phase analyzed the challenges of developing an intervention to increase knowledge about the benefits of optimal birth spacing and the risks of short intervals. The analysis would determine if the intervention was feasible, i.e. technically practical to meet the objectives, operationally implementable within the resources and capacity available in the district, economically affordable, and culturally acceptable.

Activities: May 2005

- Advance Africa conducted five focus group discussions and key informant in-depth questionnaires to regarding: how the intervention was implemented, how implementation differed from how it was planned, how acceptable it was to the community, the health providers, the district health teams, were contraceptives available and accessible to the intended spacers, what constraints/opportunities were found, and what would be the implications for a long term implementation.
- Advance Africa prepared this final report and disseminated findings at the Advance Africa End of Project Conference.

Results

1. Phase One

Findings are presented by sample population with comparisons of focus group findings being made between target subgroups and sites. Results of in-depth interviews with health system representatives and community leaders provide validation of the focus group data and additional insight. The results from

Lioma of Gurue District, Zambezia Province are emphasized because operational factors suggested that this site would have the best chance for success in implementing the follow-up intervention.

Focus Group Findings

Women age 15-19 with 0-2 children

Among all focus groups in this study, with women and men, participants claim that adolescents have an early age of sexual onset. Women age 15-19 also state that children claim that girls' sexual debut begins around age 12, although boys and girls should start between age 18-20.

Focus group discussions among women with 0-2 children at all three sites suggest they see spacing at least two to three years between pregnancies as a benefit for both women's and children's health. Some suggest an ideal number of two to three children, with others preferring four to five. In Zambezia, these women say they consider having another child when they are "all happy in the family." In Gaza, children are perceived as wealth. Focus groups of women with 0-2 children in the Nampala site also articulate that having many children is not desired, but their reasons are different. This group raised the concern that if women have too many children, they may need to resort to prostitution or "date" men for financial support. Still, some view large family size as "very good" because children are expected to "help in the future" while there is also concern about "the hard life" with lack of male support.

In the Zambezia and Nampala sites, this group was fairly knowledgeable about three modern methods: pills, injections, and condoms. In Gaza, knowledge of modern methods is mixed among the women age 15-19 with 0-2 children, with some still using traditional healers. Although traditional medicine was mentioned as a method at the various sites, it was not clear how or why it is used. For example, a participant says: "I have never done it, but saw others doing it." No further information is offered or elicited. It seems that adherence to the pill is not well understood because some women say they stop taking the contraceptive tablets when their husbands are away. This may account for complaints from the men's focus groups, where they claim they do not like pills as a method "because bleeding occurs," which is evidence of inappropriate use.

Initiation ceremonies are one channel through which girls are advised on how to protect themselves from undesired pregnancy, and STDs. This channel offers an opportunity to reinforce the value of optimal birth spacing and expand lessons for contraception.

About half of the women in the Zambezia and Nampala focus groups claim that birth-spacing is the decision of the couple. Communication between couples is varied among this group, but the main message in Gaza is that decisions on length of birth spacing rest with the husband. There is an opportunity to build on the claim that men and women do discuss the issue.

Regarding knowledge of danger signs in pregnancy, based on the responses we have, women in this 15-19 year old group do not seem to distinguish the gravity of signs that call for action. They mention all of the following symptoms: headache, stomach ache, or tiredness as compared with anemia, loss of blood, and lack of fetal movement. These women say that trustworthy networks for discussing child-spacing and pregnancy issues are midwives and close relatives such as mothers and grandmothers.

Women age 20-30 with three or more children

Like their younger counterparts, women age 20-30 with three or more children at the study sites claim that girls' sexual debut begins early but should start in late teens or early 20's. This 20-30 year old group says that initiation rites have positive purposes (e.g. cleaning the penis and extending the labia).

However, in Zambezia they suggest that the church might be opposed to certain rites or messages. The data was not clear enough to make concrete inferences.

In brief, women with three or more children, age 20-30, agree that a family of 4-6 children is ideal, although they recognize the financial and health costs: There is a preference for girls voiced among women, because girls can stay at home and help.

Focus groups among this target population indicate that women are aware that an early age of sexual pregnancy has risks. They are aware of danger signs in pregnancy and delivery. They agree that sexual relations start too early, especially for women. In contrast to their counterpart focus group of women age 15-19 with 0-2 children, the group in Zambezia reported that girls are NOT taught how to prevent pregnancy during their initiation ceremony.

The ideal number of children varied among participants. In the Nampula group, it ranged from 2-4, 4-7, and 3-6 children, and they articulated a preference for the sex of the child. This group can cite several family planning methods and know where to find them (not only at hospitals). While these women mentioned pregnancy prevention methods such as pills, condoms, and coitus interrupts, there was not sufficient probing to determine their actual use of methods. However, condoms have some negative associations: “condoms get damaged” and they are “expensive”. A discussion of traditional methods suggests that they are used for “prevention of pregnancy and when a woman wants to get pregnant, they take the medicine out.” A woman at the Zambezia site says, “Traditional methods can sometimes cause a situation where you cannot conceive anymore.”

Before promoting traditional methods, more detailed information is required on what the population uses traditionally. Although these focus groups represent women with at least three children, the participants said they like to space two-to-five years between pregnancies because “the person gets strong enough to face the next pregnancy.” About half of them say that they are using family methods or have a birth spacing plan. While they know danger signs in pregnancy, there is no evidence that they know what to do when danger signs appear.

Women age 20-30 with at least three children were not at ease talking about family size decision-making. Most seemed to agree that men do not approve of family planning, that they do not talk about it, and so “women just get pregnant.” In terms of conversational networks and decision-making, this group says that family planning is more “women’s talk”, but “men’s decision”. One person did voice an opposition, stating that “Women can also decide because they are the ones who suffer during pregnancy.”

An insightful finding from this cohort of women is that while they associate risks with close birth spacing, they are willing to have larger families. They suggest that men’s sexual desire is a deterrent for women to space more than a year apart. These women say they fear divorce.

Men with 0-2 children

Men in this group suggest that the underlying causes of early sexual onset are poverty and an absence of parents, in addition to the boys’ tendency to want to “experience their newly discovered sexuality.” At all sites, focus groups of men with two or fewer children are the “positive deviants” because they (1) practice family planning; (2) prefer a limited family size, (3) tend to talk about birth spacing with their partner. In Zambezia, this group says the ideal number of children is no more than three, and even in Gaza they say no more than four. They recognize the benefits of child spacing for health and financial reasons, stating that they can support the family when there are fewer children.

Consistent with the Zambezia Province focus group of “positive deviants”, those in Nampula generally stated a preference for a small number of children, but there is a mixed message because they also highlighted the benefits of large families and a preference for boys:

In Zambezia, the male participants with few children say that they use contraceptive methods, naming pills, condoms, and injectables as common methods. They suggest that the hospital is the most well known source of modern methods even though there are community-based distributors. Some of them claim that women say that when they practice family planning their husband gets angry. The responses of this subgroup of men concerning risks and danger signs in pregnancy are generic “not feeling well”, suggesting, that they lack information. There is some knowledge about danger signs in pregnancy, such as vomiting, weakness, stomach ache, and edema. They do articulate the understanding that a pregnant woman should rest, not work too hard, and “not be beaten”. On the other hand, there is familiarity with complications such as abortion, bleeding, and death during delivery.

Even in Gaza, participants in this group say that spacing for three or more years has positive advantages. In contrast to Zambezia where men said they use contraceptives, the Gaza subgroup did not specifically respond to the question related to their own planning. Again, the issue of male’s multiple sexual partnerships was elicited. The men in the Nampula focus group say that spacing of at least two years with a partner can lead to men having sex with other women. This in turn, raised issues of STDs and AIDS.

With regard to communication channels, interestingly, men in this group in the Nampula site reported that during initiation boys are educated on how to prevent pregnancy as well as how to behave as an “adult”. Moreover, their answers contradict discussion among women age 15-19 in Nampula, who reported that men are the decision-makers regarding timing of the next child.

These “positive deviants” in Zambezia told the focus group that communication between couples and families are useful. In general, when asked, “Who do you trust to provide us with information on birth spacing?” participants in Zambezia said, “We trust men.” The issue is discussed at the hospital in the church, and in schools.” In Gaza, they cited the elderly in the community, especially the grandmother, as well as hospital staff.

Men with three or more children

The focus groups representing men with at least three children like large families but they also claim it is better to wait for three years between pregnancies, citing the risks of shorter intervals. They recognize that sexual debut is occurring too early. According to this group in Zambezia, adolescent males are currently not receiving initiation rites, although such rites have positive aspects. These focus groups cited the church as a good source for communicating messages to delay first sexual contact and delay age of first pregnancy. There appears to be no source of information on danger signs in pregnancy, for they were unaware of them. However, some did mention retention of the placenta during delivery.

There was variation among the three sites among this group concerning ideal family size, with some preferring small numbers of offspring for fear of poverty and others highlighting benefits of many children. In Zambezia, similar to the sample of men with 0-2 children, this men’s group with larger families articulated a preference for boys. They also lacked a clear understanding of specific danger signs in pregnancy.

This group was aware of a negative association between short birth spacing and the health of mother and child. Despite the tendency for a larger number of offspring, they recommended between four and five years for spacing, mentioning the potential for complications after birth, morbidity and mortality as rationales. There were two views represented concerning decision-making on child spacing: one is that

men decide, and the other was that women decide. Men representing larger family sizes recognize that the formal health system is a source of family planning although some of them are suspicious of modern methods: “women cannot conceive when they want,” or “bleeding occurs”. They also suggest that traditional methods can be harmful. No one in one of the Zambezia groups was planning to space births, while in the other focus group of men with three or more children, one person replied that “it depends on each family’s program; each family has its own plan.”

Regarding communication, they say that pregnancies and birth spacing are women’s matters, and suggest that women like to talk about these issues with intermediate people (e.g. an aunt), but also see decision-making by the couple as an ideal situation.

Mother-in-laws over age 40

Women in the mother-in-law category tend to prefer a large family, from 4-5 in general but up to 6-10 children. However, they do recognize that many children are associated with illness and “no clothing”. The value of the children is expressed in phrases such as “they can help in the house” and “give you blood when you need it.” They mention the benefits of both sexes.

Mother-in-laws in Zambezia, like younger female women there, state that sexual debut for girls is introduced during initiation rites, and they deplore that boys no longer benefit from its teachings. The group of mother-in-laws say that women should not have their first baby before 18-20 years of age, when the “vagina is ready and a child can come out without problems.” Their awareness of physical risks is also evidenced by the fact that their knowledge of danger signs during pregnancy and delivery is greater than other focus group cohorts. They recognize that a short space (6-12 months) interval between two pregnancies affect the health of the mother and baby. What is not clearly articulated by mother-in-laws is the disjuncture between their preferences for a large family size which is incongruent with the risks of short birth intervals.

Most participants in the mothers-in-law group claim they had not been using contraceptive methods themselves, although they knew about them. They mention traditional ones, saying “but many people do not use them (traditional methods) anymore.” While one said, “I space naturally,” another stated she had used the pill. Another mother-in-law highlighted the fact that after receiving the injection she did not get pregnant again.

Mother-in-laws’ claim to talk with their daughters and daughters-in-law about sexual debut and birth spacing. In Gaza, there was the worry of AIDS and drugs and a concern that children do not listen. The majority of mother-in-laws agree that women talk about family planning, but often the men take the decision to have more children. Hence, they suggest that men and women do talk about it. This group says they trust the hospital and traditional healers to get information on birth spacing methods, as well as from volunteers, “Amodefa,” and healers.

In-depth Interview Findings

Not surprisingly Health District Directors, who are responsible for expanding the family planning program to the district level, offer a unique perspective because of their higher knowledge of reproductive health issues, their experience with the local populations, and their awareness of the correlation between fertility rate and development. In Zambezia, where the family campaign started in Gurue, the Director claims that “the average family size is seven but can exceed 10-12 people.” As a representative of the formal health system, he is well aware of the benefits of family planning, saying:

There are no advantages to big families due to the cost of living, absolute poverty, and food deficiency. The ideal number is three, because of the economic advantage of being able to feed them, [etc.] because otherwise it is difficult to educate them all.

Community health workers interviewed in their districts expressed the importance of spacing 3-5 years, while the Health District Director emphasizes that a woman should wait at least two years between pregnancies, because the child will otherwise suffer from a “crisis of malnutrition”. He claims there is still insufficient knowledge about family planning, but that some women wait three years because they have plans and follow the Ministry of Health advice, using IUDs, Depo-Provera, traditional methods, and others. In Nampala, the Director emphasizes a need for five years of spacing to recover from any complications, such as eclampsia, early delivery, miscarriage, hemorrhage, delayed deliveries. Not surprisingly, the Zambezia Director suggests that the distinction between users and non-users is a rural urban divide with rural adults thinking that children can help the family. This comment suggests that the fertility decline based on a demographic transition or change in wealth-flows has not taken firm hold in this rural area of Mozambique.

The vague responses about initiation rites are articulated, either because it is taboo to discuss them openly, or due to insufficient probing or other methodological issues. One such response was, “There are rites in the community, which cannot be explained now...some people abstain from sex, others use traditional family planning....”

Consistent with the evidence provided by providers at the community level, the Zambezia Director claims that girls have their first intercourse and pregnancy early. The Director explains that this happens “as soon as they enter the adolescent phase at 11 – 12 years, due to lack of sexual education and absolute poverty. Boys...start later, at the age of 14...[girls should have their first child] at the age of 20....”

There is an apparent distinction between the ideal and actual norms with regard to decision-making on child-spacing. The Director says that the husband makes the decision, although it should be the couple. In some areas, the woman’s uncles decide. At the community level, there are community leaders (Godfathers) who can be influential.

Consistent with the Focus Group Discussion data, in-depth interviews suggest that people trust the information from the hospital. In Zambezia, the district level focuses family planning efforts through 997 activists and 44 health counselors; although the District Director claims current coverage is quite poor because information is not properly disseminated. There are also traditional midwives, community leaders, and a group of mothers using community radios to ensure family planning.

During in-depth discussions with nurses, community health agents and traditional midwives at each study site, the roles of each demonstrates how the programs attempt to promote and reinforce child spacing messages. The clinic nurse is responsible for informing families about family planning, while community health agents reinforce messages, distribute contraceptives, and make home visits. Traditional midwives and nurses say they advise mothers on the need for pre-natal and child health care (nutrition education, growth monitoring, and vaccination), and “educate about family planning.” Messages from a Traditional midwife, Zambezia Province, Grure District, Lioma are, “Abortion is bad, the person may get sick, suffer, or even die. Between abortion and a birth, it is better to give birth.” Messages from a Nurse, Zambezia Province, Grure District, Lioma are, “Here you need at least 3-5 years to make another child. Having a child every year does not look good. We give education about health and family planning to explain about the consequences of continuous pregnancies because they create more problems in the children’s development.”

As in the focus group discussions, information about initiation is somewhat vague, perhaps because the content of such rites are relatively confidential and shared only among insiders, according to studies in Malawi. In Mozambique's province of Zambezia, the community health agent claims that initiation rites are no longer common, while the nurse and traditional midwife claim these rites still exist. The nurse and midwife explain that, as soon as the girls have the first period pain, they are taken to a specific council where they are taught about their menstruation, respect for parents and husband, how to live in marriage, and how to protect themselves against AIDS. Accordingly, initiation should be viewed favorably because youth are perceived to more respectful and helpful as a result.

These formal and informal health workers are all aware of danger signs during pregnancy. Nevertheless, the members of the population continue to have short birth intervals due to lack of knowledge, perceived outcomes of certain modern methods, and the ineffectiveness of traditional methods:

“We are doing our best to overcome the problem... The birth spacing methods used in this community are the traditional methods and the hospital ones: pills, injections and IUD, but the latter is not very common. The IUD is not accepted because it hurts the man during sexual intercourse.” (*Community agent, Lioma, Gurue District, Zambezia Province*)

“The outside community does not know the benefit of family planning. Some well-informed say that it is very good to do family planning...The community prefers Depo and condoms...[and they] do not like pills because once they forget to take them it results in a pregnancy. The condom is important because it prevents diseases. There are traditional methods but they are not effective.” (*Nurse, Lioma, Gurue District, Zambezia Province*).

In general, these female practitioners think that women make the decision about family planning, and also, in conjunction with their families. Although they clearly may be biased, they agree that the population trusts the hospital midwife, traditional midwives, and nurses. The community agents suggest that women trust their families and community leaders, after the agents inform them about family planning.

In separate discussions with religious leaders, teachers, community heads, and tea growers, there is a consistent response concerning family size, but inconsistencies with regard to the existence of initiation rites and age of sexual onset. In Zambezia, for example, there is variation, however among these local leaders concerning the ideal family size and age of first birth. The community leader claims, “Having a lot of children in the community gives value to your own home...[The ideal] for me is eight children. It is a good idea to have many children.” (*Community leader, Lioma, Gurue District, Zambezia Province*).

By contrast, the tea grower mentions an ideal family size of four to six in order to cope with home expenses. Interestingly, the religious leader is the only one of the four to claim there are no initiation rites that they existed “before the war,” that boys learn about coming of age from school, at church, and in bible schools.

The issue of age of sexual debut and pregnancy are also contradictory. While the religious leader and community leader claim girls normally start sex at age 17 and 18 respectively (with an exception among those age 14-15) the teacher and tea grower claim ages of 10 and 12 respectively. In general, this group thinks boys' sexual debut is about age 17, except for the teacher who claims boys start sex at age 12. The religious and community leaders also seem to highlight a more idealized norm of older ages for first birth, saying the majority of girls start between 19-20 years of age. The teacher says that girls are pregnant as young as age 12, but she can continue studying, and the tea grower suggests that the average age of first birth is 15 years.

All agree that birth spacing of at least two years apart is important, with the teacher and community leader suggesting five years spacing after the second birth. Pregnancy risks are well understood among this group. They cite insufficient post-partum abstinence, women's and men's traditional roles, and lack of family planning as the key obstacles to realizing optimal birth spacing. Injections, pills and condoms are available, but "women are forbidden by their husbands to get rid of the kids in their belly.

While some community members are perceived to appreciate family planning, one respondent cites religion as a barrier:

"In general our community says that planning is a sin according to the religious whereby God has given a certain amount of children and they should be made without planning. It's said that planning is a sin before God. In general it is important to do family planning. Family planning does not mean giving up births." *[Tea plantation representative, Lioma, Gurue District, Zambezia Province]*

At the same study site, the religious leader himself says that family planning requires an agreement between man. The others suggest the woman should start the decision-making process. According to the teacher, "The woman should be the first to address the spacing because she is the one who suffers during the birth." *[Teacher, Lioma, Gurue District, Zambezia Province]*

When asked why some women have few children, community representatives highlight factors such as purposeful decision-making, physiology, and migration: "Just because they feel like it or because they can not conceive, or even because their husbands work very far, in South Africa and they return for a little while not matching with the ovulation period." *[Community representative, Lioma, Gurue District, Zambezia Province]*

From the perspectives of the religious leader, teacher, community leader, and tea plantation representative, the population trusts the health services, and their own relatives. Women trust their sister-in-law, mother-in-law, or own mother. Family planning messages disseminated in the community near the hospital are said to have a positive impact, but not in the surrounding areas.

Conclusions of Phase ONE

The key findings suggested that knowledge of optimal birth spacing for a period of three to five years is just beginning to be diffused among the rural population in the study areas of rural Mozambique. This explains why there is contradictory information between the knowledge and practices of early adopters (e.g. women of low parity and male "positive deviants" with 0-1 children) and the mixed messages provided by respondents with 3 or more children. Respondents with larger family sizes are aware of the importance of spacing to avoid the risks of closely-spaced pregnancies and complications during delivery, but they have not yet translated that knowledge into practice.

Attitudes are shifting towards a desire for smaller families, but there are still barriers to practice. These include women's fear of divorce, the possibility that their male partner will engage in multiple sexual partnerships if she refuses sex, their husbands'/partners' mobility with consequent absences, and discordant messages. Men's concern over the effects of modern contraceptive use, such as women's bleeding (probably due to non-adherence to the pill), and other side-effects may inhibit their acceptance of modern methods. Contradictions in men's desired number of children and knowledge of risks in pregnancy and delivery could also be explained by the fact that men could have several wives/partners with whom they could have many children. Moreover, men are subject to the same distal determinants such as mobility and socio-cultural norms which have historically idealized large families.

A synthesis of the themes throughout the focus group discussions, which was supported by in-depth interviews, suggests that there are ways to accelerate the adoption of optimal birth spacing. Consistent themes across subgroups and sites include:

- the perception of a decreasing age of sexual onset which has negative health consequences
- the role of initiation rites as a channel for communicating messages on sexual and reproductive health, especially for girls,
- the change in “ideal” number of children towards smaller family sizes by spacing at least two years, and for three to five years among those with more knowledge
- contraceptive use among women of low parity and men with 0 to 1 children
- some awareness of risks and danger signs during pregnancy and delivery among all groups, with higher levels of knowledge among mothers-in-laws
- mixed attitudes about who in the family decides when the couple is ready to have another birth
- there are a number of social networks for communicating child spacing messages. These include mothers and mothers-in-laws, spouses, community *activistas*, the formal health care providers such as nurses, and community leaders such as teachers. The Church also plays a role in influencing norms.

Opportunities to accelerate correct information on optimal birth spacing should be undertaken through the formal health system *and* through social network channels. Adoption of innovative behaviors follows an S-curve, which this study suggests is occurring in rural Mozambique. This qualitative research has demonstrated the potential for using social network channels. It has highlighted which groups are early adopters, discordant messages, and resources for a social network approach to modern contraceptive use.

The goal of phase two should be to diminish discordant messages which encourage large families and promote the benefits of three to five year spacing. The intervention should strengthen the family planning providers’ method mix, for example, by demonstrating how cycle beads are an additional method. The OBS Project should use social networks by targeted to the extent possible by population subgroup. In summary, phase one suggested that a social network approach to optimal birth spacing is feasible in rural areas of Mozambique. In addition to focusing on improved access to family planning, the OBS Project should utilize a social network approach and test the introduction of new innovations such as CycleBeads to expand knowledge, birth spacing practices, and available methods through formal and informal channels.

2. Phase Two

Household Survey

WV visited 190 households to interview wife and husband. The sample size was estimated with a 90% confidence interval and 10% error. 190 men were interviewed but only 101 women were found in the sampled households. Others were reported to be working in the fields. Gurue is a tea plantation area and every family farms a piece of land. The questionnaires were in Portuguese and translated into Lome the local language by the interviewers. WV. Advance Africa set up the two databases for data entry and WV was in charge of the data entry.

Knowledge about contraceptive methods was higher in men (96 to 81%). Thirty-seven percent of the men report to discuss the desired number of children with their wives, while fewer women report to do so

(31%). The desire to have more children is higher in men; 58% of the men want to have 4 or more children (47% of the women). Knowledge about optimal birth spacing was reported in more than half of the households; 54% of the households reported to have heard about optimal birth spacing while 71% reported knowledge about HIV/AIDS.

Knowledge of both men and women about the risks of short intervals is low (11 and 10%). Both expressed concerns about side effects of contraceptives: bleeding, weakness, weight loss, and pain

Women trust their families, sisters and sisters-in-law for FP information, Men report to trust CHW and health staff when it comes to discuss FP and health issues. 77% of the households have a radio and 44% listen to it daily, especially in the evenings and this was thought to be a useful channel of communication if WV could access it.

An interesting finding was that while men reported to have more networks and access more people outside their families, women reported to trust their families, particularly their sisters and sisters-in-law for information.

Intervention

Through its OBS Network Coordinator, WV reached and prepared 162 new health counselors to disseminate the OBS handout and messages. They also tapped 23 Agricultural extension workers, and of course, 28 activists they had in other programs (HIV/AIDS and Malaria) and the 4 nurses from the 4 local health centers, including Lioma. Traditional birth attendants, traditional leaders, religious leaders were also informed as well as the Lady Chief of the Lioma Administrative Post who was very supportive of OBS and the project.

The operations manual was designed as a guide for WV to tap the local networks to disseminate new messages. The short implementation period and the fact the coordinator could go to Lioma only when WV had transportation available prevented the implementation of all the activities in the operations manual. The schools and the groups in charge of initiation rites were not tapped which would have been ways of reaching youth. There is still need to tap into networks that reach young couples, the ones at higher risk of short intervals.

WV has a field office in Gurue and liaised with the District Health Team, particularly the MCH District Nurse, who was very supportive of the program and liked to “wear” the CycleBeads. This was a good conversation starter, she said. WV also conducted several regular meetings with each social group to gain and maintain the support of the local authorities and leaders.

AMODEFA, the Mozambican Family Development Association has community workers and participated actively in the project. The AMODEFA Gurue Coordinator, actively mobilized them to hand out the handouts. Advance Africa also trained about 15 AMODEFA workers in the use of SDM.



Picture of Lioma's WV Activistas with Gurue MCH nurse, Lioma Midwife and AMODEFA's (in white T-shirt) activists
Lioma, September 2004

Monitoring and Supervision

WV prepared monthly report for December, February, and April. These reports helped Advance Africa and WV to go over the activities and discuss challenges and opportunities. In spite of the communication difficulties in developing countries, this way of supporting WV worked pretty well. In March, Advance Africa assisted WV to conduct a rapid monitoring survey using Lot Quality Assurance Sampling. Advance Africa helped design a short monitoring questionnaire and trained WV staff to conduct the survey and analyze the data. Data were interpreted through the use of graphs (see below).

In sum, and over a very short period of time (five months) there was an increase in the number of people that report intent to space the birth of their next child. It is not known yet if this knowledge will lead to changes in use of FP or other behaviors. A longer period of intervention and observation to gain better understanding of the dynamics of the local social networks, particularly to reach young couples is necessary. It is important to note that men, the reported main decision makers, showed greater reported knowledge and behavior improvement than women. This may be attributed to greater contact that social networks that men have compared to women who seem to be confined to family members only.

Here are the main findings for men:

1. The percentage of men who had received an OBS pamphlet grew from 42% to 74%
2. Men who knew the definition of OBS as 3-5 years increased from 63% to 84%
3. Men expressing a desired birth interval between 3 and 5 years increased from 53% to 79%
4. Percentage of men who report to plan to use OBS for their families increased from 74% to 100%

And for women:

1. The percentage of women who had received an OBS pamphlet grew from 37% to 68%
2. Women who knew the definition of OBS as 3-5 years increased from 58% to 74%
3. Women expressing a desired birth interval between 3 and 5 years increased from 47% to 58%
4. The percentage of women who report to plan to use OBS for their families increased from 68% to 90%

Table 1. LQAS survey findings for Men – Lioma March –June 2005

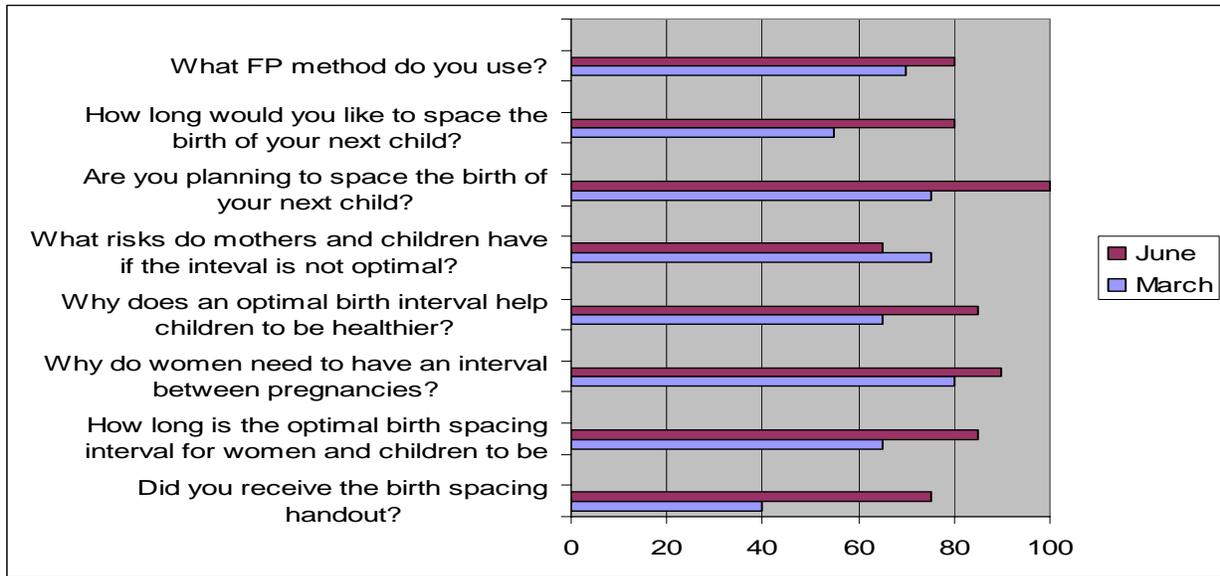
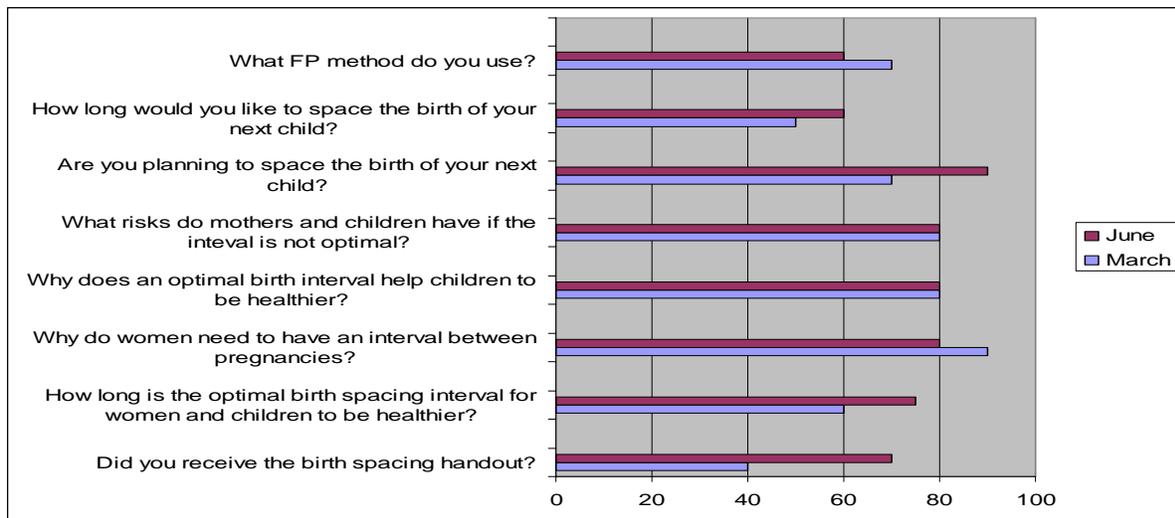


Table 2. LQAS survey findings for Women – Lioma March –June 2005



The above gender differences in the perception of messages and reported behaviors may be explained by the more limited social networks women access compared to men and their lower literacy rate and ability to read in Portuguese. These gender differences and the need of clear messages need further study.

In its final report, WV reported the concern local at the imminent end of the project and their lack of funds to continue printing the handout and distributing SDM CycleBeads. The information provided was reported to be important to the community and accepted by the local authorities and leaders. These findings were confirmed in phase three.

3. Phase Three

In this phase, Advance Africa met with WV staff and conduct focus group discussions and interviews with District and health center staff and community leaders and members. These efforts documented an increase in FP use, achieved mostly through the expansion of method mix and increases in the other

methods. The Lioma health center had 289 new clients in the last four months compared to 50 in the previous year.

Although WV distributed 1300 CycleBeads, only 58 CycleBeads users are registered at the health center. *Activistas* “many couples are using the CycleBeads now.” It was suspected that users do not want others to know whether they use a method or not, but this was not confirmed. In the focus groups, SDM was reported to help couples discuss FP decisions. Men also reported that their sex life improved as a result of 12 days of abstinence. Men reported to participate more in FP decisions and to support spouse.

World Vision’s community health workers proved to be a feasible way to disseminate OBS messages through other local networks. Activities were easily integrated into WV’s community activities and transportation costs were shared. Costs were considered acceptable and included the salary of the network coordinator and part of the time of supervisors in Gurue and Quelimane.

Local district health team asked WV to continue the project which showed the acceptability of the program. As a result of the spread by word of mouth, there were demands by the local health committees for the project be extended to other communities near Lioma.

The findings confirmed that Lioma has well defined social networks of community leaders (Community Leaders’ Council), health workers, *activistas*, government and public servants (teachers, agriculture extensionists, etc.) and that all these networks were aware of the OBS project and that the goal of the project was to help save the lives of women and children. In spite of the high reported knowledge in the LQAS surveys, still there are discrepancies about what OBS means, particularly among the men’s groups and there was not consensus on the 3 to 5 duration of the interval. Particularly among the older groups, they emphasize the benefits for the child while the younger couples reported it is good to take care of the mother’s as well as the child’s health. These focus group findings may be attributed to the short duration of the project (five months) and justify longer implementation and monitoring.

There was consensus though on that the responsibility of spacing decisions lies mostly with men, and that the desire to have children is high. Men reported to give in into spacing due to pressure from neighbors and sisters-in-law nagging about their wives getting pregnant too often or having too many children. At that time, he allows his wife to go the health center. There was consensus on the need for spacing when many babies have low birth weight or die, and women have them too close, or have too many. Also there is consensus that children are expensive and families need to incur in many expenses and parents cannot work to take care of them when they get sick.

Birth spacing messages were reported to be known, but the most interesting feature was the SDM. This was perceived as the most value-adding component of the OBSP. Women do not waste time going to the health facility, does not have health consequences to women, it is simple and accepted by their religion. The 12th day abstinence is hard and it was reported to require a lot of “couple discipline.” The use of condoms during those days was not widespread. *Activistas*, who are mostly men, reported that the method was very much accepted and that they already have requests from other communities nearby that want to have it.

Conclusions

1. OBS has very high potential of improving maternal and child health in Mozambique because about half of the intervals are less than three years, a third between three and five years, and a

little less than a sixth over five years. That means that only one third of the births in Mozambique take place after an optimal interval.

2. Through a consistent and OBS focused strategy and adequate contraceptive supply, the MOH would benefit particularly young mothers because three-quarters of the women aged 15-19 years old are likely to have a short preceding interval compared to 58 percent of 20-24 year olds. A quarter of 15-19 year olds have even shorter intervals less than 24 months and a fifth of 20-29 year olds.
3. This short project has gathered evidence that there is need to reach young couples who are at greater risk and that there is need to address gender differences and improve the clarity of the messages. This preliminary evidence of the feasibility of using social networks is positive and should be continued to assess effectiveness.
4. Despite WV's best efforts, the intervention did not progress beyond the settling-in phase due delays in WV restarting its activities in Zambezia, rains, transportation and communication problems. The difficulties of working at community level should not underestimated and longer periods of implementation may be required to make adjustments and make things run smoothly.
5. The project also showed that it is feasible for a core-funded project to streamline technical assistance and provided focused inputs to assist PVOs to implement OBS activities and add value to their programs.
6. It is feasible to increase knowledge about the risks of short intervals through existing social networks and rapidly increase FP use, particularly when the method mix is appropriate to the community preferences and wants.
7. It is feasible and very acceptable to use SDM to promote FP decision making for optimal birth spacing. The effectiveness and compliance of the SDM was not studied and deserves further support and monitoring.
8. The increased effectiveness of having something tangible, in this case the handout and the beads to remind of the messages needs further study.
9. In sum, this project has proved the feasibility of using social networks to disseminate OBS messages in Gurue, Zambezia and probably in other provinces of Mozambique. The approach increased knowledge and the reported intent to space the next child.

Recommendations

We recommend that:

1. USAID/Mozambique should share the findings with World Vision and the Ministry of Health with an objective of continuing to support World Vision in Gurue to expand its OBS activities. The findings should also be discussed with other PVO/NGOs so they can replicate the social network intervention in Nampula and Gaza provinces, and with JHU/HCP to improve the clarity of the OBS messages in the OBS handout and other communication materials.
2. The project and monitoring should be continued in Lioma, and an endline survey should be conducted after the intervention has been well-functioning for at least six months.
3. World Vision should consider scaling up other communities in Gurue, and possibly other districts Zambezia Province where it is working.
4. It is necessary to advance the repositioning of FP services in Africa in order to streamline community approaches like this one. For this reason, it is necessary to have a broader monitoring and community database to improve the effectiveness of the approach. A longer period of implementation, from three to five years, would be ideal to see actual changes in FP use and spacing behaviors.
5. Core-funded projects should design methods and approaches that support and enhance the work of PVO/NGOs, which are at the forefront of service delivery.

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Annex 1

Distribution of Focus Groups and In-Depth Interviews

The plan for focus group discussions keeps the number of FGDs to a reasonable number (12 for women and 12 for men plus 6 mother-in-law FGDs). It categorizes groups into female adolescents at 0 parity and women age 20-34 with children, some who space and others who do not, as well as parallel men's groups. The rationale is to get spacers and non-spacers to express their opinions in the same discussion. In each intervention community, two focus groups will be held with each of the categories:

Plan A: Distribution of Focus Group Discussions (FGDs)

Category	Location and # FGD	Total by category
<i>Women, married or in co-habiting partnership</i>		
Women age 15-19 who are at 0 - 2 parity	Gaza-2 Nampula-2 Zambezia-2	6
Women age 20-34 with children (group includes women 4 or more children)	Gaza-2 Nampula-2 Zambezia-2	6
<i>Subtotal</i>		12
<i>Husbands/men in cohabitating partnership</i>		
Husband/cohabitating male with partner at 0 to 2 parity	Gaza-2 Nampula-2 Zambezia-2	6
Husband/cohabitating male with partner 4 or more children	Gaza-2 Nampula-2 Zambezia-2	6
<i>Subtotal</i>		12
<i>Mother-in-laws</i>	Gaza-2 Nampula-2 Zambezia-2	6
<i>Subtotal</i>		6
<i>TOTAL # of FGDs</i>		30

In-depth interviews will be held with the following categories of key informants in order to understand the birth spacing issues from potential “birth spacing networks”:

Distribution of In-depth Interviews

Category	Location	
Providers (doctors, nurses, CHWs, TBAs)	1 doctor or nurse, 1 CHW, 1 TBA in: Gaza = 3 Nampula = 3 Zambezia =3	9
Community leaders (chiefs, school teachers, small kings, small queens, etc.)	1 chief, 1 school teacher, 1 small king or queen in: Gaza = 3 Nampula = 3 Zambezia =3	9
Religious leaders	1 representative of main religious group in: Gaza = 1 Nampula = 1 Zambezia =1	3
District health leaders/MOH	1 district health officer in: Gaza = 1 Nampula = 1 Zambezia =1	3
<i>TOTAL # of in-depth interviews</i>		24