

THE ACCEPTABILITY AND
FEASIBILITY OF INTRODUCING THE
STANDARD DAYS METHOD™ (SDM)
OF FAMILY PLANNING IN
REPRODUCTIVE HEALTH CLINICS
IN BURKINO FASO, WEST AFRICA

Final Report

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Support from the United States Agency for International Development (USAID) enables the Institute to assist a variety of international institutions, both public and private, to introduce and expand SDM services.

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Support from the United States Agency for International Development (USAID) enables the IRH to assist a variety of international institutions, both public and private, to introduce and expand Standard Days Method services. IRH offers technical assistance and support to organizations and programs interested in providing the SDM. For more information, please contact IRH at irhinfo@georgetown.edu or visit their website at www.irh.org.

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ACRONYMS AND ABBREVIATIONS

ABBEF	Association Burkinabé pour le Bien-Etre Familial (Burkina Family Welfare Association)
AIDS	Acquired immunodeficiency syndrome
AMASAR	Association pour une Maternité sans Risque (Safe Motherhood Association)
DSF	Direction de la Santé de la Famille (Directorate of Family Health)
FP	Family planning
GER	Gross [school] enrollment ratio
HIV	Human immunodeficiency virus
IEC	Information, education and communication
INSD	Institut National de la Statistique de la Démographie
IRH	Institute for Reproductive Health
IUD	Intrauterine device
LEADD	Laboratory for Applied Studies in Development (Laboratoire d'études appliquées aux dynamiques de développement)
NGO	Nongovernmental organization
RGPH	Recensement Général de la Population et de l'Habitat (General Population and Housing Census)
SDM™	Standard Days Method
SFPS (FHA)	Santé Familiale et Prévention du SIDA (Family Health and AIDS Project)
SMI (MCH)	Santé Maternelle et Infantile (Maternal and Child Health)
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

INTRODUCTION

The need for appropriate family planning (FP) services in sub-Saharan Africa is substantial and growing. A new natural family planning method, the Standard Days Method™ (SDM), has the potential to expand women's and couples' FP choices and contribute to enhanced reproductive and family health. Developed by the Institute for Reproductive Health (IRH) at Georgetown University, the SDM is based on the "fertile window" during a woman's menstrual cycle, and involves a simple set of color-differentiated counting beads (Cycle Beads™) that couples can use to help them avoid intercourse during that period. In an efficacy trial, the SDM was found to be 95% effective if used correctly (Arévalo, Jennings, and Sinai 2002).

Burkina Faso, a sub-Saharan nation with both a high unmet need for FP and a high potential demand for natural FP methods, appears to be a promising place for the introduction of the SDM. Burkina Faso has an estimated unmet need for FP of 28.8%, of which 21.8% is related to birth spacing, as well as a potential demand for FP of 42.6%, of which 31.7% is for birth spacing (INSD 2004). Research further indicates that although knowledge of modern FP methods is high and these methods are readily available, many Burkinabé women prefer to use natural/traditional methods. Among the approximately 14% of women of reproductive age (15–49) in Burkina Faso who report using some method of FP, 4.2% report using a traditional method (INSD 2004). But despite the existence of a strong potential demand for natural family planning methods in Burkina Faso, access to these methods is still often limited. Although most FP institutions state that they offer natural methods, observation shows that these methods are rarely included among the FP services currently available.

In 2002, the Burkina Faso Ministry of Health invited JHPIEGO to conduct a prospective operations research study to evaluate the acceptability and feasibility of introducing the SDM into the method mix at select existing facilities offering FP services. JHPIEGO collaborated with the IRH to conduct the study, with support from the Laboratory for Applied Studies in Development (LEADD), a nongovernmental organization in Benin, and Mwangaza, a nongovernmental community mobilization organization in Burkina Faso.

Methodology

The study was designed to answer two major research questions:

1. Is the SDM an acceptable FP method as perceived by user couples and FP providers in Burkina Faso?
2. Is it feasible to introduce the SDM into existing FP service delivery sites in Burkina Faso?

The study was conducted at three FP service provision sites, one in a rural area and the other two in an urban setting, Ouagadougou. The SDM was offered to women as part of routine FP services at the three participating facilities. Women acceptors (n=79) were interviewed at enrollment, 1 and 6 months later. A subset of the women and their male partners participated in focus group discussions. Trained health care providers (n=14) and new FP clients who declined the SDM (n=30) were also interviewed. The 79 female SDM acceptors in the study (plus 16 other acceptors who did not participate in the study) represented, on average, 10% of new FP acceptors across the three participating FP facilities during the enrollment period (May 2003–January 2004). Of the 920 new FP clients who were offered the SDM during the enrollment period, 133 expressed interest in the method, 95 were found to be eligible for the SDM, and 87

initially agreed to participate in the study. Eight women withdrew at the beginning because they said they could not come to the facility for followup visits, leaving a final sample of 79 women.

Overall, enrollment in the study was not as high as originally anticipated due to the delay in community outreach and promotional activities of several months, combined with the use of overly strict eligibility criteria for obtaining the method (e.g., women who did not know the length of their cycles were turned away). Given the small sample size, many of questions asked in this study should be further explored when services are scaled up, even if the methodology used is less rigorous.

DISCUSSION OF FINDINGS

Study findings suggest that SDM is a method acceptable to Burkinabé couples in the study and is feasible to introduce into existing FP services. The SDM appears to be a culturally acceptable FP method among users primarily because, similar to traditional methods with which approximately half of Burkinabé women and men of reproductive age report they are familiar, the method does not have any effect on the woman's health and has no disagreeable side effects. Among SDM acceptors, 58.6% and 20.7% reported that they chose the method for these two reasons, respectively. Another 19% of SDM acceptors mentioned that no medications or devices were needed, while 17.2% cited moral/religious considerations as the reason they chose the SDM. Furthermore, periodic abstinence is a method that was familiar to many SDM acceptors: 16.7% of respondents reported they had used periodic abstinence in the past, while 10.9% of respondents reported using it in the last 2 months.

The process of introducing the SDM into existing FP services at the three participating facilities was accomplished with few major difficulties reported by providers. None of the participating providers left the study, and they all said they wanted to continue to offer the method. Participating FP providers reported effectively integrating provision of the SDM into their daily practice. The SDM was incorporated systematically into the array of FP methods offered by the providers and was included as part of the general counseling provided to everyone who came to the facility in search of a FP method. The same rooms and service points were used for SDM services as for all other FP methods. Physical facilities, staff, equipment and scheduling did not require any modification. The providers all agreed, however, that the time devoted to counseling for the SDM is relatively long and necessitates adjustments in the organization of work. Teamwork reportedly made it possible to reduce the waiting time for women wishing to use the SDM or another method. As with any new method, counseling time is likely to decrease as providers gain experience with the method, and future IEC/BCC campaigns could contribute to an increased base level of knowledge of the method on the part of the client. Other difficulties mentioned by four of the providers included: women's lack of knowledge about their menstrual cycles; women's failure to keep followup appointments; and men's failure to participate in the counseling sessions. With respect to followup, in a typical service delivery context as opposed to the study context described here, followup would be less problematic because it would be less frequent, with only one followup visit for SDM users recommended. In addition, it may be unrealistic on the part of providers to expect men to attend counseling sessions for SDM, as men rarely accompany their partners on FP visits, but rather attempts should be made to reach men through appropriate information, education and communication (IEC) efforts.

At the 6-month followup, 48% (n=38) of users continued to use the method, while 25% (n=20) had discontinued, 24% (n=19) were lost to followup and 3% (n=2) became pregnant while using the method. Discontinuation of the method was reportedly related to several factors but chiefly to having had two cycles or more outside the accepted interval range or an irregular cycle; after two or three cycles, half of the discontinuers said they abandoned the method because their

cycles were not suited to it. The two pregnancies recorded among women who continued to use the method, 2.5 % of the women admitted to the study, represent a relatively acceptable rate in view of the efficacy of other methods. The pregnancies were due to unprotected sex during the fertile days in one case and unreported reasons in the other case.

Similar to users of other FP methods in Burkina Faso, women SDM users and their husbands/partners were better educated than women and men of reproductive age in the general population: the majority had attended secondary school or higher, including 64% of women and 79% of husbands/partners. The relatively high levels of education among study participants may also reflect the higher educational profile of urban residents in two of the three study sites. The women had a mean age of 31.7. Their husbands/partners were generally older than they were: 39% of the women were age 35 or older compared with 71% of their partners who were age 35 or older. Most SDM users (79%) had between one and four living children, with a mean of 2.8 children. Only 11.7% of the SDM user respondents had never used a FP method prior to choosing the SDM, while 21.8% had not been using a FP method during the previous 2 months. However, many of those respondents who had used a FP method either in the past or during the previous 2 months were using methods that have not been shown to be very effective, such as foaming vaginal tablets, periodic abstinence, or other traditional methods.

Knowledge of how to use the SDM appeared to be relatively high at the 6-month followup, with continuing users scoring a mean of 4.9 and discontinuers scoring a mean of 5 on a 6-point scale of SDM knowledge items recalled spontaneously. Knowledge of how to use the SDM exhibited an upward trend among continuing users between the two followup interviews 1 and 6 months after enrollment.

Correct use of the SDM remained consistently high: the percentage of users with the correct bead marked (as verified by the interviewer) at the time of the survey was 95% at both followup interviews, as was the percentage of women who reported moving the black band every day. Continuing users scored a mean of 2.7 on a 3-point scale of “correct use” of the method.

Overall, the ease of using the SDM, as reported by female continuing users, improved between the first and sixth cycles. Ease of use was measured by the women’s responses to six questions assessing their perceptions of how easy it was to use/follow specific elements of the method, such as the CycleBeads, the calendar, collaboration with their partner and management of the fertile days. All aspects of method use that were assessed had a higher proportion of respondents who reported that it was “easy” after cycle six (more than 60%) than after cycle one (more than 50%).

Satisfaction with the method among continuing users was very high at both the 1- and 6-month followup interviews: more than 90% of women SDM users at both followup interviews reported being satisfied with the method and said they would recommend it to others. The desire to continue using the method was also very high among both female and male continuing users (more than 90%).

At both followup interviews female SDM users reported that involvement of their husband/partner in the use of the SDM was high: 90.2% at 1 month and 86.8% at 6 months. According to the women, the men’s involvement was shown by their moving the ring themselves or reminding the woman to do so, marking the calendar with the first day of the woman’s menstrual period, and communicating about the fertile days and use of protection during that time.

Dialogue between members of a couple to come to an agreement about management of the fertile days is one of the necessities of effective SDM use. Use of the SDM appeared to promote

increased communication among couples about sexuality and condom use as part of the need to reach consensus on how to manage the fertile days. Consensus about days for sexual relations, however, appeared to lessen somewhat with time, according to female users: consensus with partners was reported to be 79% after the first cycle and 70% after the sixth cycle. Furthermore, 34% of women after the first cycle and 41% after the sixth cycle said they had real disagreements with their partners on managing a fertile period. Management of fertile days was also a problem cited by some participants in the focus group discussions with female and male continuers and discontinuers. In these discussions, the length of the fertile window was considered to be very long, and some men's reluctance to use condoms and the difficulty of practicing total abstinence reportedly made management of the fertile days difficult for some couples.

Interviews about gender and couple dynamics with a subset of women SDM users (n=31) and their partners (n=14) revealed that the SDM may have affected the women's and husbands'/partners' perceptions about condoms: men have reportedly become less reluctant to use condoms and their reactions have become more positive according to women respondents. Among men, 21.4% acknowledged that they no longer have a negative reaction to condoms and 28.6% no longer make unilateral decisions about sexual intercourse and condom use. Women reported that they no longer think that their partners are hinting at infidelity when they mention use of condoms.

Beyond the prevention of pregnancy, use of the SDM seems to have helped women to better understand their menstrual cycle and communicate with their partners about sexuality. Focus group discussions held with women SDM users and their partners suggest that the SDM improved rapport in some couples by strengthening communication about sexuality, which has long been considered a taboo topic.

CONCLUSIONS AND RECOMMENDATIONS

Given the high level of unmet need for FP in Burkina Faso, efforts to respond to this unmet need must involve expanding the options available to women and to couples. Study findings suggest that introducing a simple and natural new FP method such as the SDM, which may be more culturally acceptable to certain clients, represents a viable strategy for expanding contraceptive choice in the country.

In light of these study findings, it would be useful to expand the availability of the SDM to other health care facilities in Burkina Faso. Expansion would require some modifications of the approach, including the training modules and supporting materials. If the Ministry of Health or private health care organizations decide to scale up the SDM in Burkina Faso in the future, the following steps for introducing the method into existing FP services are recommended:

- **Promote the SDM in facility catchment areas:** At the beginning of the study, attendance at the FP clinics was low and there was little demand for the SDM because it was a new method with which women were unfamiliar. Mwangaza began a media campaign several months after the study began and there was an immediate increase in demand. Promotional activities should begin as soon as the method is introduced at a new facility to create demand in surrounding communities. SDM users specifically recommended the following promotional strategies: creating advertising spots in different languages, or without words for people who are illiterate; finding men to do outreach and awareness-raising among men; and publicizing the health advantages of the SDM more widely. As part of these promotional efforts, different IEC strategies should be used to target men, such as informational flyers designed for men that are given to female clients to take home, radio program targeted at

men, and community meetings that involve male leaders, so that men can support their partners in learning about and using the SDM. All IEC activities could be conducted using a multi-method approach since overall FP use in Burkina Faso is low, and FP programs in general could benefit from an intensified IEC campaign.

- **Revise approaches to provider training:** Training should be adapted to the level of preservice training or cadre of the provider. In Burkina Faso, auxiliary birth attendants need a longer period of training, and the content and duration of the modules should be revised accordingly.
- **Use revised eligibility criteria and other job aids:** Many women who expressed interest in using the SDM at the three study clinics were denied the method because they did not meet strict eligibility criteria. These criteria include denying the method to women who did not know the length of their menstrual cycle. This exclusion presents an unnecessary obstacle to method use and could discourage women from using any method at all. Based on study findings about SDM from other developing countries, IRH has developed revised job aids for providers and supervisors, including eligibility criteria for use by providers in the context of routine service delivery that uses a series of simple questions to assess cycle length and regularity and a “Knowledge Improvement Tool” that is intended to help supervisors structure their supervision visits. These job aids were shared with stakeholders in Burkina Faso at the meeting to disseminate findings from this study.
- **Re-examine followup strategies:** It is unlikely that it will be feasible to follow up SDM clients at their homes once the method is taken to scale. If that is the case, the initial counseling that SDM clients receive at the health facility must be of very high quality to ensure that they understand how to use the method. In addition, providers will need to strongly encourage women to return to the facility for followup. New strategies for followup (community approaches) should be explored as well.
- **Put in place a process for procuring the CycleBeads:** Putting in place a sustainable procurement process for the CycleBeads continues to be a concern to avoid stockouts. Authorities at the Ministry of Health would do well to allocate resources for the SDM in their plans for financing contraceptives and to work with other countries that have introduced SDM, such as Benin, to identify an ongoing supply mechanism. Currently, IRH is working with USAID/Washington on guidance to Missions and programs on how to procure CycleBeads at the lowest unit price.

ACCEPTABILITY AND FEASIBILITY OF INTRODUCING THE STANDARD DAYS METHOD™ (SDM) OF FAMILY PLANNING IN REPRODUCTIVE HEALTH CLINICS IN BURKINA FASO, WEST AFRICA

INTRODUCTION

The Training in Reproductive Health Project at JHPIEGO, in collaboration with the Institute for Reproductive Health (IRH) at Georgetown University, and with support from the Laboratory for Applied Studies in Development (LEADD), a nongovernmental organization (NGO) in Benin, conducted an 18-month operations research study to evaluate the acceptability and feasibility of introducing a new natural family planning method, the Standard Days Method (SDM), into selected family planning (FP) and reproductive health facilities in Burkina Faso, West Africa. The study, which was funded by the United States Agency for International Development (USAID), was conducted from May 2003 through October 2004 in accordance with the national FP policy and guidelines in Burkina Faso. The study was initiated with the assistance of the Family Health and Prevention of AIDS (French acronym SFPS) program, a large health care training and services program that operated until September 2003 and in which JHPIEGO was a partner.

Rationale for the Study

The need for appropriate, high-quality FP services in Sub-Saharan Africa is substantial and growing. Unmet need for FP in the region has increased in recent decades, despite the decline in unmet need and rise in contraceptive use in other regions of the developing world (Population Institute 2000). Efforts to respond to this unmet need must involve expanding the options available to African women and couples. Increasing access to FP methods not widely offered or introducing new FP methods that are more culturally acceptable represent viable strategies for expanding contraceptive choice in Africa (Mane 2000).

Data from Burkina Faso suggest that natural family planning may be a method that is culturally appropriate and acceptable to the people of this country. Research indicates that even though knowledge of modern FP methods is high and these methods are readily available, many Burkinabé women prefer to use natural/traditional methods. In Burkina Faso, traditional methods include periodic abstinence, lactational amenorrhea, withdrawal and abstinence (Institut National de la Statistique de la Démographie [INSD] 2004).

Approximately 14% of women of reproductive age (15–49) in Burkina Faso report using some method of FP, with 9.7% using a modern method and 4.2% using a traditional method (INSD 2004). Modern method use is remarkably low given that 89% of women report knowledge of at least one modern method. Traditional method use, by comparison, accounts for a relatively large proportion of the contraceptive prevalence rate in the country, and among married men and women, the proportion is even higher. Among the 13.8% of married women who are currently using some FP method, 5.1% use a “traditional” method (INSD 2004). And among the 37.2% of married men who are currently using some FP method, 15.4% use a “traditional” method. Moreover, 49.3% of women 15–49 and 52.3% of men 15–59 report knowing of at least one traditional method, with 42% of women and 46% of men knowing of the traditional method of periodic abstinence.

Despite the existence of strong potential demand for natural FP methods in Burkina Faso, access to such methods is often limited. Although most FP institutions state that they offer natural methods, observation shows that these methods are rarely included among the FP

services currently available. This may be due to several factors, such as lack of information and lack of trained health care providers, erroneous ideas about natural methods, and lack of political and financial resources. In view of the level of unmet FP need in Burkina Faso (estimated at 28.8%, of which 21.8% is related to birth spacing), as well as the potential demand for FP (42.6%, of which 31.7% is for birth spacing), the incorporation of a simple natural family planning method such as the SDM into existing FP services could help to improve reproductive and family health among women and couples in Burkina Faso (INSD 2004). In addition, providing adequate training in a low-cost FP method like the SDM will increase providers' knowledge about reproductive health and expand the options they can provide to clients.

Context for the Study

Burkina Faso is a developing country in which 45.3% of the population lives below the absolute poverty line, estimated in 1998 to be 72,690 CFA francs (\$130 US dollars) per adult per year. The Sustainable Human Development Index, estimated at 0.303 in 2000, was lower than the average for other Sub-Saharan African countries (PNUD 2000).

Burkina Faso is a landlocked Sub-Saharan country. It covers an area of 274,200 square km and is bordered by six countries: Mali, Niger, Benin, Togo, Ghana and Côte d'Ivoire. Its tropical, Sudan-like climate alternates between a dry season, from October to April, and a rainy season, from May to September.

Burkina Faso has a population of 10,312,609 inhabitants (INSD 1996). The population is growing at a rate of 2.4% per year, and it is estimated that by the year 2010 the country will have 14,718,647 inhabitants (INSD 1996). The crude birth rate is estimated at 46.1 per 1,000 population, while the general mortality rate is 15.2 per 1,000. The infant mortality rate is 81 per 1,000 births, and the total fertility rate is 6.2 (INSD 2004). Life expectancy at birth was 53.8 years in 1996 (INSD 1996). Approximately 90% of the population lives in rural areas. Women make up almost 52% of the population. The population is essentially young, with 50.4% falling within the 0–14 age bracket (INSD 1996).

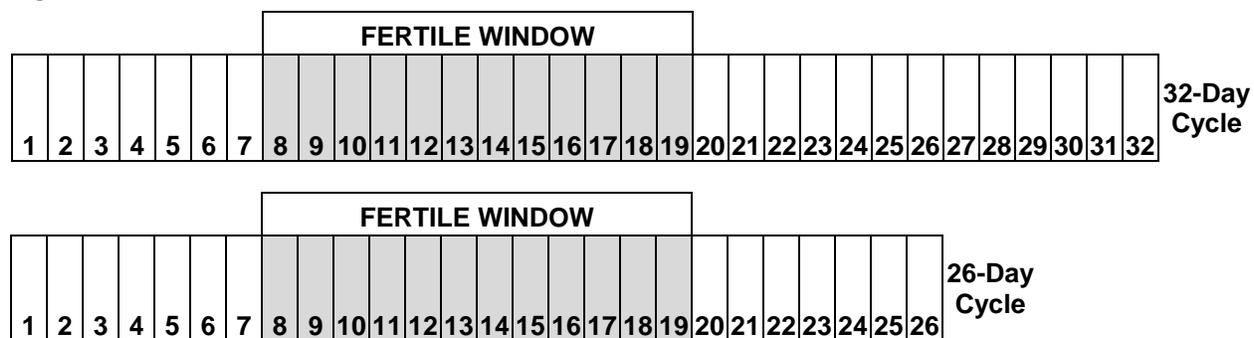
The gross enrollment ratio (GER) was 43.60% for the 2001–2002 academic year (33.4% for girls and 47.1% for boys). The national literacy rate for adults remains low: 28% in 2001, with marked disparities between men and women and between rural and urban areas.

Standard Days Method

Developed by IRH, the SDM is based on the “fertile window” during a woman’s menstrual cycle, and involves a simple set of color-differentiated counting beads (Cycle Beads™) that couples can use to help them avoid intercourse during that period¹. If a couple wishes to prevent a pregnancy, the woman and her partner avoid unprotected intercourse on days 8 through 19 of every menstrual cycle (see **Figure 1** below).

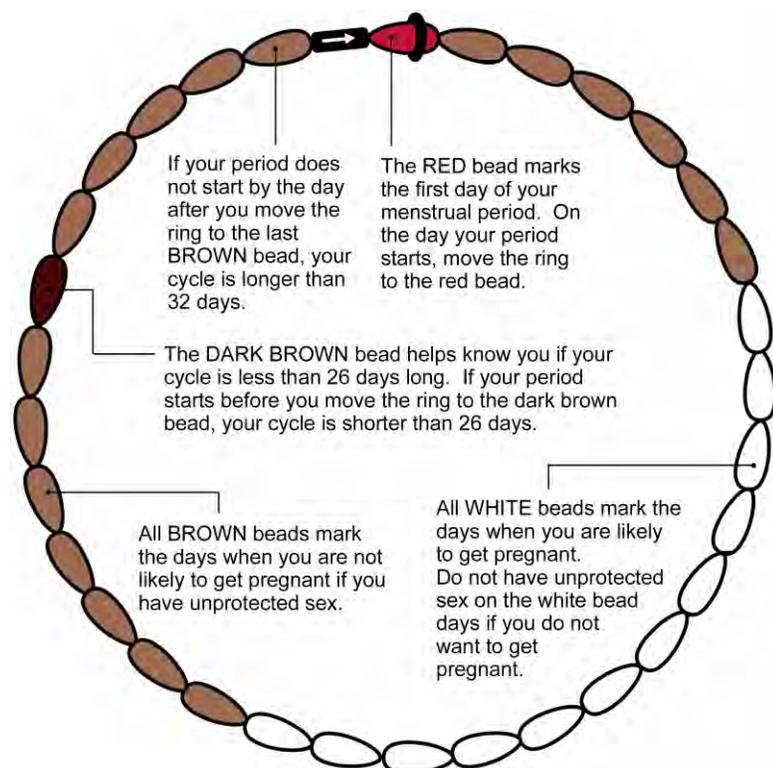
¹ The Standard Days Method™ and CycleBeads™ are trademarks of the Institute for Reproductive Health at Georgetown University. CycleBeads are a U.S. patent-pending technology.

Figure 1. The Fertile Window



To use CycleBeads (see **Figure 2** below), the woman moves a rubber ring over one bead every day to visibly track where she is in her cycle. The beads are color-coded to indicate whether the woman is on a fertile or an infertile day. Day 1 of her cycle, which is the first day of menstrual bleeding, is represented by a red bead, which is followed by 6 brown beads (indicating that the first 7 days of the cycle are not fertile). Days 8–19 of the cycle, represented by white phosphorescent beads, are the fertile window. Women are counseled to avoid unprotected intercourse when the rubber ring is located on the white beads. Days 20–32 are represented by brown beads, and are days for which pregnancy is very unlikely. To assist a woman to track her cycle, the bead for day 27 is darker brown in color. The woman is counseled that, if her menses returns before the black band is on the dark brown bead, she has a short cycle, and she is advised to visit her service provider. The same advice is given if the woman completes the 32nd day and her menses has not returned. The SDM can be used by a wide variety of women, as long as their menstrual cycles usually last between 26 and 32 days. Results from an efficacy study confirmed that women are capable of using the CycleBeads correctly, and that many women found the string of beads, with each bead representing a day of the menstrual cycle, to be a helpful tracking and communication tool. (Arévalo, Jennings, and Sinai 2002). The SDM can be taught by a trained provider or community health/outreach worker to women, men or couples in either individual or group sessions.

Figure 2. CycleBeads



Although the SDM does not protect against HIV/AIDS, counseling for the method can afford the counselor an opportunity to provide information about HIV/AIDS and the importance of dual protection.

RESEARCH DESIGN AND METHODOLOGY

Research Questions and Objectives

The study was designed to answer two major research questions:

1. Is the SDM an acceptable FP method as perceived by the user couples and FP providers in Burkina Faso?
2. Is it feasible to introduce the SDM into existing FP service delivery sites in Burkina Faso?

Research objectives were to:

- Document the process of introducing the SDM at FP sites
- Describe SDM provider and user socio-demographic profiles
- Document SDM user continuation at 1 and 6 months after enrollment
- Assess SDM user knowledge and satisfaction with the method
- Examine if SDM use affected user couple dynamics
- Assess provider knowledge and perceptions of the SDM
- Make recommendations regarding whether and how the SDM should be scaled up in Burkina Faso

Study Design

This was an 18-month prospective operations research study that utilized qualitative and quantitative research methods.

Sample

Three reproductive health service delivery sites in Burkina Faso were selected to participate in the study based on the following criteria:

- FP clinic caseload is sufficiently large
- Clinic locations are easily accessible
- Sites are included in USAID's Family Health and Prevention of AIDS (SFPS) program

Two of the sites selected were in urban areas: Santé Maternelle et Infantile (SMI) Centrale and Association Burkinabé pour le Bien-Etre Familial (ABBEF). The third site, Kombissiri health center, was located in a rural area (see **Table 1**). This urban-rural representation made it possible in documenting the situation to take into account the socio-cultural characteristics of the various localities. With regard to FP activities, rural and urban areas differ in terms of human resources. The urban areas are generally better staffed.

Another criterion in the choice of sites was their public-private status. While ABBEF is a private nonprofit facility, the other two sites are public, government-run facilities. In general, private facilities have larger organizational and staff incentive models than public facilities. As concerns status, however, it should be noted that all of the sites selected have been recognized as Gold Circle providers by the Family Health and AIDS (FHA) Project for the quality of their FP services.

Table 1. Family Planning Methods Provided at Each Site, not Including the SDM

Type of Method	Kombissiri	ABBEF	SMI Centrale
Oral contraceptives (pills)	+	+	+
Injectables	+	+	+
Norplant implants®	+	+	+
Condoms	+	+	+
Spermicides	+	+	+
IUD	+	+	+
Lactational Amenorrhea Method (LAM)	+	-	+
Voluntary surgical contraception	-	+	-

Table 2 shows, by service delivery site, the different groups of participants included in the study.

Table 2. SDM Study Sample by Respondent Group and Facility

Respondent Group	ABBEF	Kombissiri	SMI Centrale	Total
SDM users (women)	37	15	27	79
Male partners of SDM users	9	1	7	17
Other FP method users	10	10	10	30
Health care providers	3	5	6	14

Sources: Site activity reports, admission interview, FP client exit interview, provider interview, partner interview

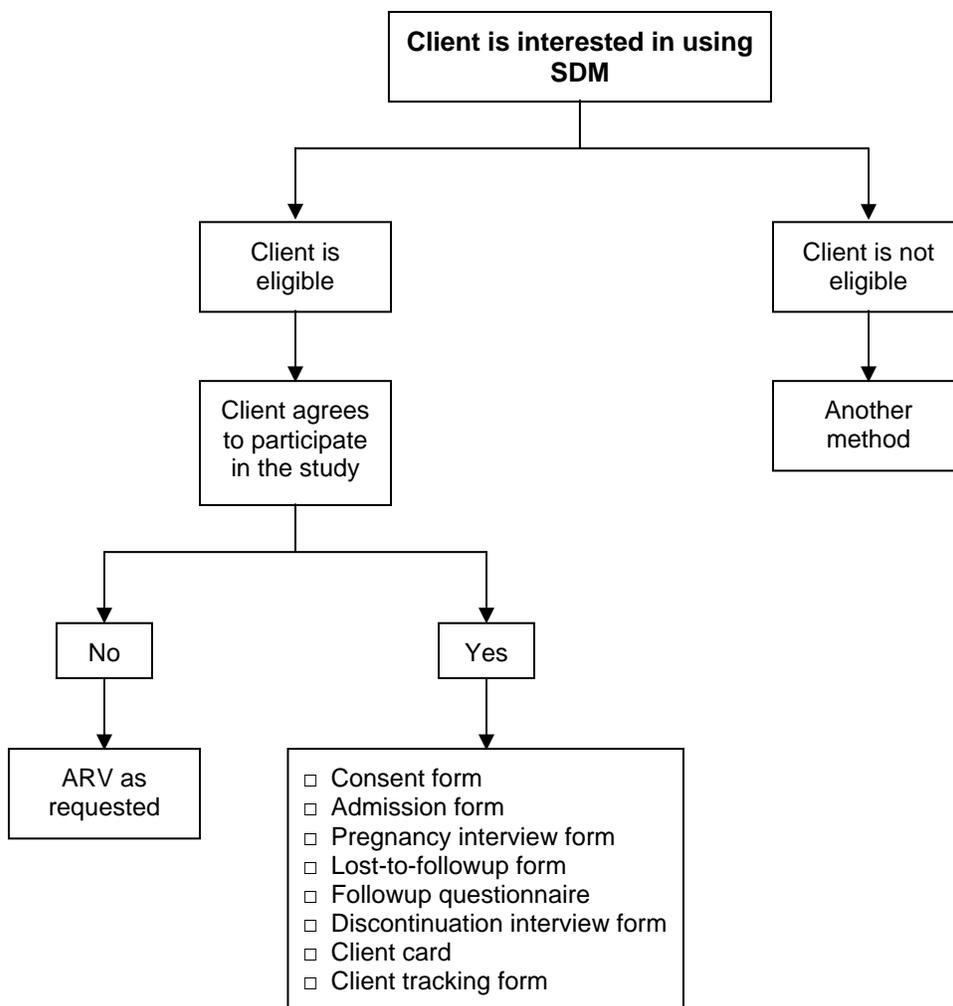
Client Enrollment

Providers at the three service delivery sites enrolled women in the study. The providers were midwives, nurses, auxiliary midwives and social workers already working at the selected sites and engaged in FP activities. A total of 14 providers took part in the enrollment process.

Informed consent was sought from all the women and their partners, utilizing a consent form, the content of which was explained to clients and translated from French into local languages as necessary.

Figure 3 below depicts the decision tree used for enrolling women who wished to use the SDM.

Figure 3. Decision Tree for Enrolling Women



Data Collection

Quantitative and qualitative data were collected for the pilot study, including: 1) information from a client information form and a client register; 2) an assessment of provider competence and experience with the method; 3) statistics on the service/clients, abandonment rate and failure rate (number of woman who became pregnant while using the method); 4) assessment of clients' satisfaction with the method and with the services received in connection with the method; and 5) reasons women decided not to choose the SDM.

The data on enrollment of SDM clients were entered into the information management system of each of the clinics participating in the study. Apart from the client card, which was specific to the method, records on the SDM were kept in the overall FP register along with records on the other methods, following the procedures established by the Ministry of Health. Service statistics were analyzed to determine the number of new and continuing SDM users. This data collection system made it possible to document the total number of SDM clients at each clinic throughout the project. The study coordinator collected these service statistics during supervision visits to each site.

The data collection instruments specifically developed and translated into French for use in this study and the corresponding numbers of respondents who completed each instrument are listed below (see **Table 3**).

Table 3. Data Collection Instruments and Respondents

Data Collection Instrument	Respondents		Information Collected
	Type	Number	
Admission interview	SDM acceptors who consented to study	n=71	How heard of method; past FP use; menstrual cycle; socio-demographic information about self and partner; reason chose SDM; plan to manage fertile days; cost of method
Followup interview	SDM users after one cycle	n=61	Reported use of method; pregnancy status; knowledge of how to use method; ease of use; satisfaction; fertile days; cooperation and participation of partner
	SDM users after 6 cycles	n=38	
Pregnancy interview	SDM users who became pregnant	n=2	date of pregnancy; use of SDM; management of fertile days
Lost-to-followup questionnaire	Interviewers filled this out for SDM users with whom the study lost contact	n=19	ID number of SDM user; birth date; number of months enrolled in study; reason for loss to followup; date considered lost to followup
Discontinuation interview	SDM users who stopped using the method	n=20	Recent menstrual cycles; reason stopped using SDM; current FP use; knowledge of how to use SDM; reported use of SDM; participation and cooperation of partner; ease of use
SDM provider interview	6 months after start of study	n=12	Socio-demographic and professional information; perceptions of SDM; eligibility criteria; knowledge of SDM; ease of integrating SDM into existing FP services; perceptions of SDM; supporting materials
	18 months after start of study	n=14	
Other FP method user client exit interview	New FP clients who did not choose SDM	n=30	Current use of FP; recall of SDM; FP discussions with partner; perceptions of SDM; comparison between SDM and other FP methods; FP decision-making
Gender interview	SDM users (continuers and discontinuers)	n=31	Male partner's degree of control over woman's daily activities and dress; household and sexual decision-making; whether SDM affected couple's relationship
	Male partners	n=14	
Continuing user focus group discussion guide	SDM users	n=14	Perceptions, constraints and difficulties of using SDM; partner communication and management of fertile days; exposure to SDM messages; satisfaction
	Male partners	n=0	
Discontinuer focus group discussion guide	SDM users	n=3	Perceptions, constraints and difficulties of using SDM; partner communication and management of fertile days; exposure to SDM messages; satisfaction
	Male partners	n=3	

These instruments were pretested and revised as needed.

Study participants who gave verbal consent include: female SDM users (n=79), other FP users (n=30), and focus group discussion participants (n=17 female SDM users and n=3 husbands/partners).

Other data sources included:

- FP register/logbook at each service delivery site
- FP client card
- Client tracking form

The focus group discussions held with women SDM users and their partners included three focus group discussions with female continuing users (one had eight participants and two had only three participants); one focus group discussion with female discontinuers (three participants); and one focus group discussion with male discontinuers (three participants).

The data collection schedule outlined below was followed throughout the study:

- First interview with SDM users 1 month after enrollment
- Second interview with SDM users 6 months after enrollment
- Monthly supervision by members of the supervision team
- Monthly meetings at each FP service site to track clients enrolled in the study
- Interviews with providers at 6 and 18 months

At each site, one provider was given responsibility for ensuring followup of the women SDM users enrolled in the study. Initially, clients were given an appointment to return to the clinics for followup but this arrangement proved to be problematic as few women returned. This is believed to be because the method is relatively easy to understand and clients did not feel the need to return to the site for scheduled visits, and clients' schedules kept them from returning to the clinic for followup. To address this problem, in January 2004, health providers began implementing an active home visit strategy that observes the principles of confidentiality. However, in some cases providers had recorded incomplete contact information for users, which made it difficult for them to locate some of the women.

When following up the enrolled women, providers at each site used a tracking sheet that included information on each enrolled woman and the number of followup visits completed. This system enabled the study team to arrange for the followup either at the site or at the woman's home. Thus, most of the 1-month and 6-month followup interviews with SDM users were home visits.

Providers also received supervision periodically throughout the study period. As part of the supervision activities, providers were observed providing general FP counseling and SDM-specific counseling; and they completed a knowledge questionnaire about the SDM that included eligibility criteria and use of the method. Also, providers were observed conducting followup interviews with SDM users, and records were examined to determine the number of outreach activities conducted and numbers of FP clients, including new SDM users and study participants. At the end of the supervision visit, the providers were given feedback on their performance and suggestions for improvement.

The entity responsible for coordinating the study and the supervisors organized the monthly service site meetings.

A mid-term evaluation and a final evaluation were carried out using the data collection instruments and sources described above.

Limitations of the Study

Overall, enrollment in the study was not as high as anticipated in the study protocol. The protocol projected, based on previous similar studies, that 7% of FP clients at the three selected sites would choose the SDM, yielding a sample of approximately 256 clients. But in fact only 3% of new FP users enrolled in the study. The smaller than expected sample size meant that it was not possible to disaggregate the findings by facility and socio-economic characteristics of SDM users.

Moreover, enrollment was not as fast as anticipated and was particularly sluggish at the beginning of the study, largely due to the lack of community outreach and promotional activities (which were later undertaken). The slow rate of enrollment meant that only two followup visits could be conducted with the SDM users during the study period, at 1 and 6 months after enrollment in the study, rather than the three visits originally planned, with the last one scheduled to take place 1 year after enrollment.

There was a high proportion of missing values for two study instruments: the admission interview (10% missing) and the discontinuation interview (35% missing). Of the 79 women SDM users enrolled in the study, eight did not receive the admission interview (three from ABBEF, one from SMI Centrale, and four from SMI Kombissiri). The eight women were enrolled early in the study before providers at the facilities understood the enrollment process well, and they therefore completed only an informed consent form and recorded the women's names in their facilities' respective FP registers/logbooks. In addition, seven out of the 20 discontinuers did not take part in a discontinuation interview. In four cases, this was because the providers conducting the followup visit reportedly did not have a copy of the discontinuation interview available. In two cases, the reasons the interview was not administered is unknown. In one case the woman was mistakenly classified as pregnant and was administered the pregnancy interview.

The study team was not able to locate adequate numbers of focus group participants to complete the number of focus groups originally planned. Only five of the six that were planned were actually completed, and the planned focus group with partners of female SDM continuers was not conducted. Moreover, four of the five focus groups conducted had only three participants.

PREPARATORY AND PROMOTIONAL ACTIVITIES

Training and Other Preparatory Activities

Preparatory activities for the study included:

- Baseline study
- Training of providers and followup personnel
- Training of supervisors and trainers
- Adaptation of service records
- Provision of information about the method and study to FP stakeholders and partners, including Ministry of Health staff

The purpose of the baseline study was to ascertain the existing situation prior to the study at the three facilities chosen for the operations research study. The baseline study examined the organization of FP services and method mix at the three sites and the attitudes and needs of potential SDM users with respect to FP services. Key informant interviews were conducted with facility staff, and focus group discussions were conducted with potential SDM users. Findings from this study made it possible to better tailor the process of information dissemination and awareness-raising to the needs of the target population. A description of how FP services were organized at each facility is provided in a matrix in the **Appendix**.

A total of 12 providers, four at each of the three sites, participated in a 2-day training in the SDM using a competency-based training approach in which trainers use interactive methods and test trainees before and after training to verify knowledge levels and skill competency. Providers were also oriented to the data collection instruments for the study. Role plays were also conducted in several local languages using the interview guides.

In addition, seven supervisors and trainers were trained in the SDM. These included two physicians, one health counselor responsible for FP at the Direction de la Santé de la Famille (DSF), one midwife from each of the three sites and one midwife from the Association pour une Maternité sans Risque (AMASAR), an NGO engaged in reducing maternal mortality.

The record-keeping systems at the sites were adapted to accommodate the information needs of the study.

Community Mobilization

Initially, interest in the SDM was low at the study sites and enrollment in the study was slow, which is not surprising given that the method was new and no IEC/behavior change communication efforts had been implemented to promote it. To address this problem, promotional activities were conducted. Mwangaza, a local partner organization, undertook community mobilization in the communities surrounding the three participating service delivery sites to inform community members of the availability of the SDM and to recruit clients into the study. They held discussions with community leaders, health personnel and the community, and recruited community outreach workers, trained them and developed appropriate outreach messages for the community. Community outreach workers used posters and an outreach guide (12 pages produced for use in interpersonal communication activities and training of community outreach workers) to convey their messages.

A mass media campaign was also designed and conducted using radio and TV advertisements in French and Moré, which ran for 1 month. The 1-minute TV spot was produced and presented during prime viewing hours. Messages focused on the advantages of the SDM method and on places where it could be obtained.

FINDINGS

SDM User Profile

Socio-demographic information on women SDM users and their husbands/partners was collected at enrollment as part of the admission interview.

Women SDM users had a mean age of 31.7 (median=31), with a range of 18 to 50. **Figures 4 and 5** below indicate that the majority of the women are younger than their male partners. Of all women enrolled, 25% are between 18 and 25 years of age, while another 39% are age 35 and

older. According to these women, 71% of their partners are age 35 or older. The age group 18 to 25 is not represented among the husbands/partners.

Figure 4. Age Distribution of Female SDM Users

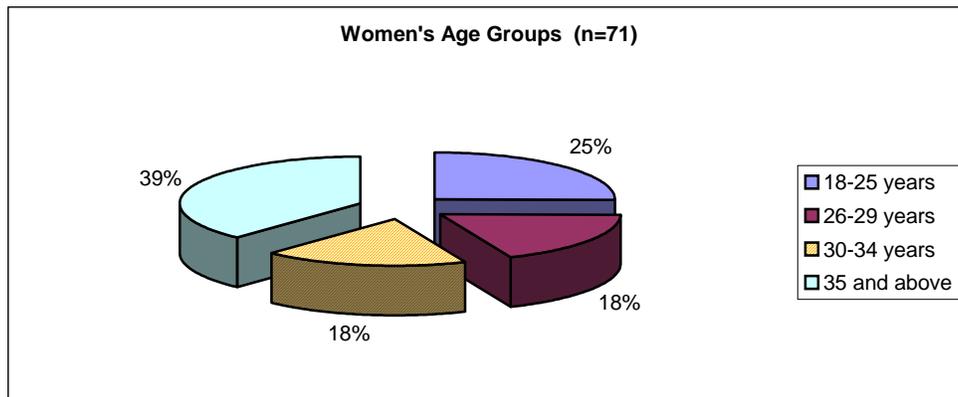
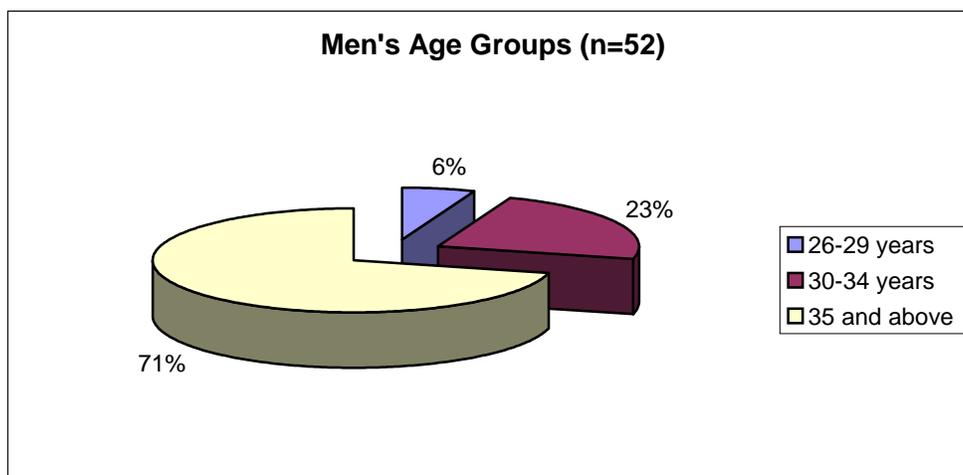
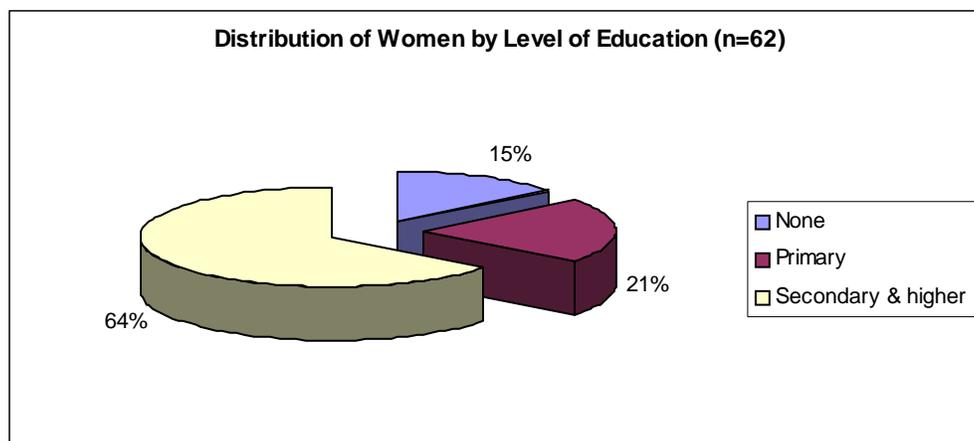


Figure 5. Age Distribution of Husbands/Partners



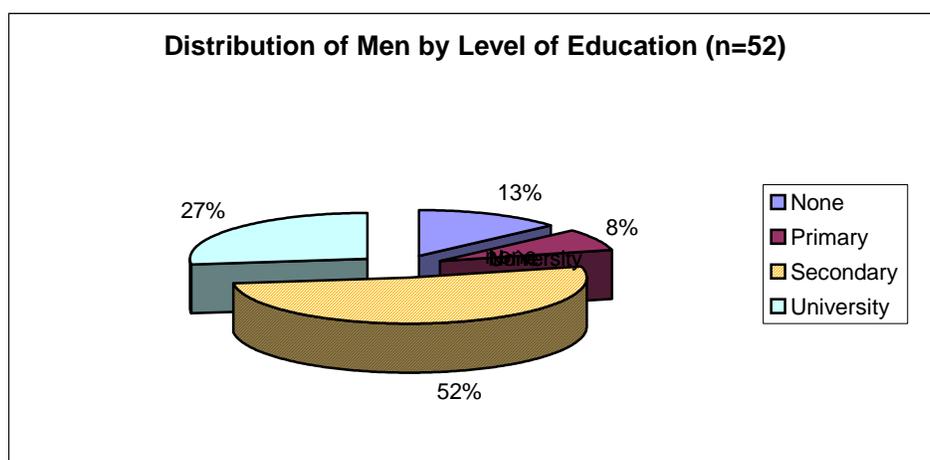
Similar to users of other FP methods in Burkina Faso, women who chose to use the SDM appeared to be better educated than women of reproductive age in the general population (see **Figure 6**). Only 15% of SDM users reported having never attended school, compared with 80.3% of women age 15–49 in the general population; 21% of SDM users reported primary school as their highest level of education obtained, compared with 11% of women age 15–49 in the general population; and 64% of SDM users reported attending secondary school or higher, compared with only 8.7% of women age 15–49 in the general population (INSD 2004). This distribution reflects the educational profile of female FP method users in general in Burkina Faso. Contraceptive prevalence is 52% for the most educated women (secondary or higher) and only 10.6% for those who never attended school (INSD 2004). For traditional method use, the difference in contraceptive prevalence among women is less dramatic: 8.8% for the most educated women (secondary or higher) and 4.9% for those who never attended school (INSD 2004).

Figure 6. Level of Education of Female SDM Users



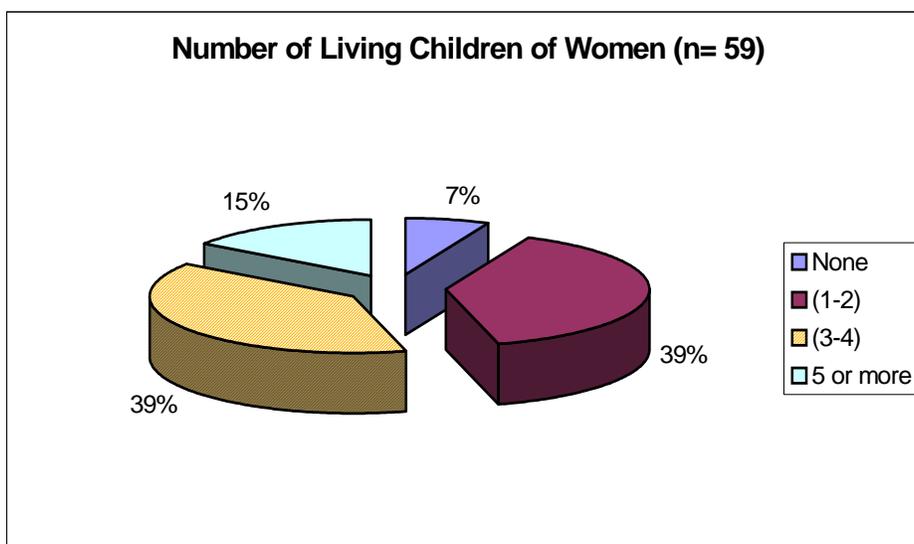
Similar to female users of the SDM, husbands/partners who used the method appeared to be better educated than men of reproductive age in the general population (see **Figure 7** below). Only 13% of husbands/partners reported having never attended school, compared with 65.2% of men age 15–59 in the general population; 8% of husbands/partners reported primary school as their highest level of education obtained, compared with 18% of men age 15–59 in the general population; and 79% of husbands/partners reported attending secondary school or higher, compared with only 16.9% of men age 15–49 in the general population (INSD 2004). This distribution reflects the educational profile of male FP method users in Burkina Faso.

Figure 7. Level of Education of Husbands/Partners



The number of living children a woman has is a factor that can influence her decision about whether to use FP and which method to use. Women SDM users had a mean of 2.8 living children (median=3.0) with a range of 0 to seven children. Data in **Figure 8** show that the majority of respondents (78%) had from one to four children. However, it should be noted that there was a high proportion of missing data (20 cases, 25.3%): eight women did not complete the admission interview and another 12 had missing data for unknown reasons.

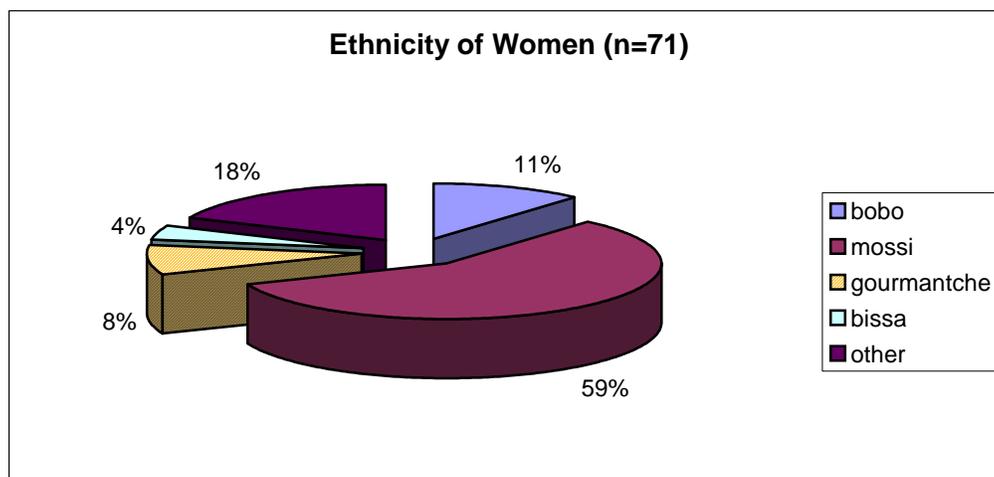
Figure 8. Number of Living Children for Female SDM Users



In general, most women in Burkina Faso with one to four children wish to space, rather than limit, their births. Among married women in Burkina Faso who use any method of FP, the proportion using any method is 3.7% for married women who have no child; 15.3% for those who have one or two children; 15% for those who have three or four children; and 14% for those who have five children or more (INSD 2004).

With respect to ethnicity, the majority of female SDM users are Mossi (59%), which corresponds with the normal distribution of ethnicities in the communities surrounding the selected sites (see **Figure 9** below).

Figure 9. Distribution of Female SDM Users by Ethnicity



Religious practices of female SDM users (n=71) were Catholicism (55%) and Islam (45%).

SDM Provider and Supervisor Profiles

Twelve providers were originally trained to offer the SDM at the three sites, with three new providers trained during the course of the study. The 14 providers who were active at the time of the second interview (followup at 18 months) had ages that ranged from 36 to 58 years old with

a median of 46.5 years old (mean=45.7) and most are very experienced in FP practices. The length of service at their current sites offering FP ranged from 4 to 20 years, with a median length of service of 10 years (mean=10.9). Their experience in the practice of FP ranged from 8 to 24 years, with a median length of service in FP of 14.5 years (mean=15.1). ABBEF providers had practiced the longest at their site; however, providers at SMI Centrale had the most experience in FP practices. Given the high volume of FP clients at ABBEF, two extra providers were trained to maintain the study activities. Their role is to conduct followup visits with the women enrolled in the study. **Table 4** shows the profile of the providers at the 18-month interview.

Table 4. Profile of SDM Providers at 18-Month Interview

Sites	Status				Total
	Midwives	Auxiliary Birth Attendants	Group Educators	Social Workers	
ABBEF	1	0	1	1	3
Kombissiri	1	4	0	0	5
SMI Centrale	4	2	0	0	6
Total	6	6	1	1	14

The table above listing trained SDM providers interviewed 18 months after the study began represents the traditional structure of FP service delivery personnel in Burkina Faso. See the **Appendix** for further information about how FP services are organized at each of the three sites.

At the beginning, 12 providers were involved in the study, four at each site. Job stability was noted among the participating providers during the study period. During the course of the study, one provider at ABBEF was transferred but a new provider joined the study. At SMI Centrale, two new providers joined the study, for a final sample of 14 SDM providers. Interest in the method may help explain the absence of resignations in spite of the extra work required to fill out tools needed for research purposes.

Seven supervisors and trainers were also trained in the SDM. These included two physicians, one health counselor responsible for FP at the Direction de la Santé de la Famille (DSF), one midwife from each of the three sites and one midwife from the Association pour une Maternité Sans Risque (AMASAR), an NGO engaged in reducing maternal mortality.

Providers' and Supervisors' Experience Introducing the SDM

The introduction of the SDM into FP services already being provided by the staff working at the three selected sites presented no major difficulties according to the trained providers (n=14) and trained supervisors as indicated by their comments on the SDM supervision forms they completed. The SDM was incorporated systematically by providers into the array of FP methods offered and was included as part of the general counseling provided to everyone who came to the facility in search of a FP method. As with all the other FP methods, specific counseling was provided to women wishing to use the SDM. The same rooms and service points were used for the SDM as for all other FP methods. Physical facilities, staff, equipment and scheduling did not require any modification.

Participating providers reported they did not have any major problems in adapting their work practices to the new tasks they had to carry out to support the SDM study. At some sites, inservice training was offered, which helped to interest other providers in delivering the SDM. The only difficulty reported by providers concerned the duration of the counseling on the SDM. The providers agreed unanimously that the time devoted to counseling for the SDM is relatively long and necessitates adjustments in the organization of work. Teamwork made it possible to reduce the waiting time for women wishing to use the SDM or another method.

Four providers (28%) said they encountered some difficulties in offering the method. Difficulties mentioned were:

- The relatively long time required for counseling
- The women’s lack of knowledge about their cycles
- Women’s failure to keep followup appointments
- The men’s failure to participate in the counseling sessions

Supervisors at the three sites mentioned that other providers at the sites who were not trained in providing the SDM were interested in the method but the supervisors had reservations about whether some of these providers, particularly auxiliary health workers, were skilled enough to offer the method.

Providers were asked to rate the usefulness of job aids and supporting material provided to them as part of the SDM study. Their responses are shown in **Table 5** below.

Table 5. Providers’ Evaluation of Job Aids and Supporting Material Used

Equipment	Evaluations (n= 14)			
	Very Useful	Useful	Useful but Need Changes	Don’t Know
CycleBeads	2	6	6	0
Calendar	5	7	2	0
Client’s card	2	11	1	0
Publicity materials	2	11	1	0
Provider’s card	3	11	0	0
Counseling guide	3	7	2	2
Total	17	53	12	2

More providers expressed an opinion about the materials during the second interview than they did in their first interview. For instance, there were 12 responses in the “Don’t know” column at the time of the midterm evaluation, but only two at the second interview. This difference shows that, over time, the providers’ opinions about the supporting material used grew stronger.

All providers said that the method should continue to be offered at FP sites in Burkina Faso. The chief reasons for this opinion were:

- Absence of any side effects
- Enlarged the list of FP methods

- Affordable cost
- Ease of provision

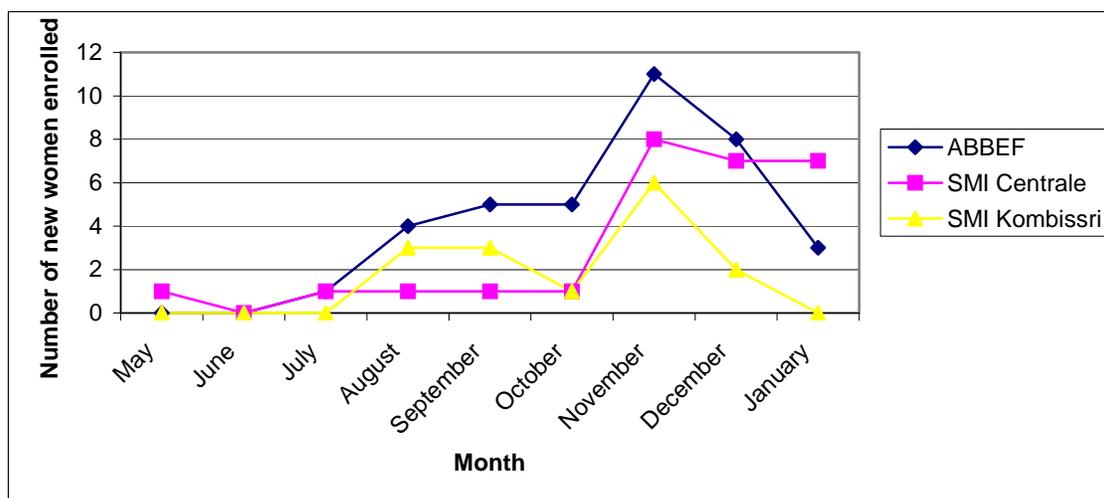
Chief expectations of the providers:

- Expansion of the SDM to other FP service provision sites
- Training of providers at the SDM sites
- Avoidance of CycleBeads stockouts

Client Enrollment Trends

A total of 79 female SDM users were enrolled in the study between May 2003 and January 2004 (See **Figure 10** below).

Figure 10. Monthly Enrollment of Women in the SDM Study, May 2003–January 2004



From this figure the following observations can be made:

- Recruitment trends are similar at all three sites.
- Relatively few subjects were recruited during the first 3 months.
- The peak in recruitment at all three sites occurred following the community mobilization and mass media campaigns carried out in October and November 2003.
- With the exception of SMI Centrale, where the downward trend was relatively minor, a sharp drop in enrollments was noted 1 month after the community campaigns.

The low prevalence of FP use in Burkina Faso partly explains the short-lived effect of the community mobilization campaign on enrollment. Very few women are informed about the SDM through FP clinics and therefore do not have the opportunity to hear about it as part of the counseling provided at those clinics. The television spots and community mobilization activities helped reach and attract women who had natural family planning needs but had not had the opportunity to become informed about it. The sources of information cited by the women who used the method confirm this assertion.

Enrollment in the study was not initially as high as anticipated in the study protocol, which projected, based on previous similar studies, that 7% of new FP clients at the three selected sites would choose the SDM. As **Table 6** shows, however, the 79 female SDM acceptors in the

study (plus 16 other acceptors who did not participate in the study) represented, on average, 10% of new FP acceptors across the three participating FP facilities during the enrollment period (May 2003–January 2004). Of the 920 new FP clients who were offered the SDM during the enrollment period, 133 expressed interest in the method, 95 were found to be eligible for the SDM and 87 initially agreed to participate in the study. Eight women withdrew at the beginning because they said they could not come to the facility for followup visits, leaving a final sample of 79 women.

Table 6. Enrollment in the Study by Site (May 2003–January 2004)

	New FP Users/Acceptors	ABBEF	CSPS Kombissiri	SMI Centrale	TOTAL
A	Number of FP clients requesting SDM	52	30	51	133
B	Number of FP clients <i>eligible</i> for SDM (SDM acceptors)	45	20	30	95
C	Number of SDM acceptors who did not participate in the study	8	0	0	8
D	Number of withdrawals from the study (at outset)	0	5	3	8
E	Final number of SDM acceptors enrolled in the pilot study	37	15	27	79
F	Number of all new FP acceptors, including SDM acceptors	281	271	368	920
G	Of new FP acceptors, percentage of clients who accepted SDM (B/F*100)	16%	7.4%	8.2%	10% (mean)

Source: Site activity reports, Admission Interview

In addition to problems with slow recruitment due to the lack of initial community outreach and promotional activities already discussed, there were other factors that contributed to the small sample of women enrolled in the study. Chief among these were the strict eligibility criteria used for the method. Many women who expressed an interest in the method but who did not know the length of their menstrual cycle were turned away. Other women who were interested in using the SDM were unable to use the method because of reported irregularities in their menstrual cycle, some of which were due to disruptions caused by the use of certain hormonal contraceptive methods. An additional factor limiting enrollment was women's place of residence. Women who lived in localities not covered by the activities of the three sites were not enrolled because of the difficulties that following them would have entailed.

Previous Contraceptive Use

Women enrolled in the study were asked during their admission interview if they had ever used any FP method before and, if so, which method or methods. The response rate for this question was low, for unknown reasons. Among the 60 women who responded, only 11.7% reported they had never used any FP method. The remaining women reported using a range of different methods, with oral contraceptives (31.7%) being the most common. Women study participants were also asked about their use of contraception during the 2 months prior to choosing the SDM. The response rate for this question was also low. A total of 21.8% of the 55 respondents reported using no FP method in the last 2 months, while the rest reported using one or more methods, with oral contraceptives (21.8%) being the most common. Responses to both multiple-choice questions are shown in **Table 7**.

Table 7. Family Planning Methods Ever Used (multiple response, number and percentage of cases)

FP Methods Ever Used Before SDM	Ever Used (n=60)		Used in Last Two Months (n=55)	
	n	%	n	%
No method	7	11.7	12	21.8
Foaming vaginal tablets	5	8.3	9	16.4
Condoms	10	16.7	7	12.7
Injectables	10	16.7	3	5.5
Withdrawal	7	11.7	0	0
Oral contraceptives	19	31.7	12	21.8
IUD	12	20.0	2	3.6
Lactational amenorrhea method	1	1.7	1	1.8
Periodic abstinence	10	16.7	6	10.9
Norplant implants	5	8.3	5	9.1
Female sterilization	3*	5.0	0	0
Other traditional	4	6.7	3	5.5

Note: The “yes” responses here appear to have been due to a misunderstanding. When asked what they used in the past 2 months, none of these three women mentioned sterilization.

Sources of Information/Reasons for Choosing the SDM

The media were the main source of information for SDM clients (66%), with television being the source cited by the most clients (64%). Health workers were the second most frequent source of information, followed by family members, friends and neighbors.

Clients and their partners cited various health, economic, religious and psychological/emotional reasons for choosing the SDM. These reasons are illustrated in **Table 8** below.

Table 8. Reasons for Choosing the SDM (multiple choice)

Reasons for Choosing SDM	(n=58)	
	n	% of Cases
No effect on health	34	58.6
No side effects like other methods	12	20.7
No medicines/device needed	11	19.0
Religious/moral reasons	10	17.2
No effect on breastfeeding	6	10.3
Partner opposed to other FP methods	5	8.6
Less expensive	3	5.2
Other	4	6.9

Health reasons: The principal reasons cited by clients and their partners were the desire for a new method that would not affect their health and which would enable them to avoid the side effects of other contraceptive methods. Clients felt that illnesses, menstrual irregularities, weight gain and heart problems caused them too much suffering. Their male partners felt that existing methods undermined women's health and caused anxiety in their homes. *"With pills and other medications that you swallow, we're buying illnesses that we didn't know we were getting."* (Male client at ABBEF who continues to use the SDM) For all these reasons, the SDM is welcomed as healthy. *"Pills contain chemicals that can harm women's health. The necklace is healthy, natural. It's not something that is artificial, so there is no problem,"* said a male client, age 56, at ABBEF, who stopped using the SDM.

Religious reasons: Some religions forbid the use of most contraceptive methods. The SDM's conformity/compliance with religious beliefs was cited as a reason for using the method. *"If you use the necklace, you are not one of those who are killing human beings, you are in union with God."* (User at ABBEF)

The CycleBead's symbolism was also mentioned: *"The necklace is similar to rosary or tasbih beads.² It is an aid that can be used to seek what one wants, which is simply to avoid pregnancy."*

Psychological/emotional reasons: The anxiety and stress associated with the use of modern contraceptive methods is detrimental to the couple's relationship: *"Taking the pill was a constant source of anxiety. When she would forget...getting close to her was difficult. She never understood how the products were going to react. All that caused anxiety, but when we got the necklace, we got away from all that."* (Male client at ABBEF who stopped using the SDM)

The SDM is a method that requires the agreement of both members of the couple, and it allows direct contact during sexual intercourse: *"The necklace is not hidden like the other methods, which women generally keep hidden from their husbands. Agreement between the husband and the wife is imperative."* (Female client, age 26, at the Kombissiri health center who continues to use the SDM)

"I didn't want there to be anything between us, for example a condom used for contraception. The necklace, with the practice of abstinence, allows direct contact during sexual relations." (Male client at ABBEF who stopped using the SDM)

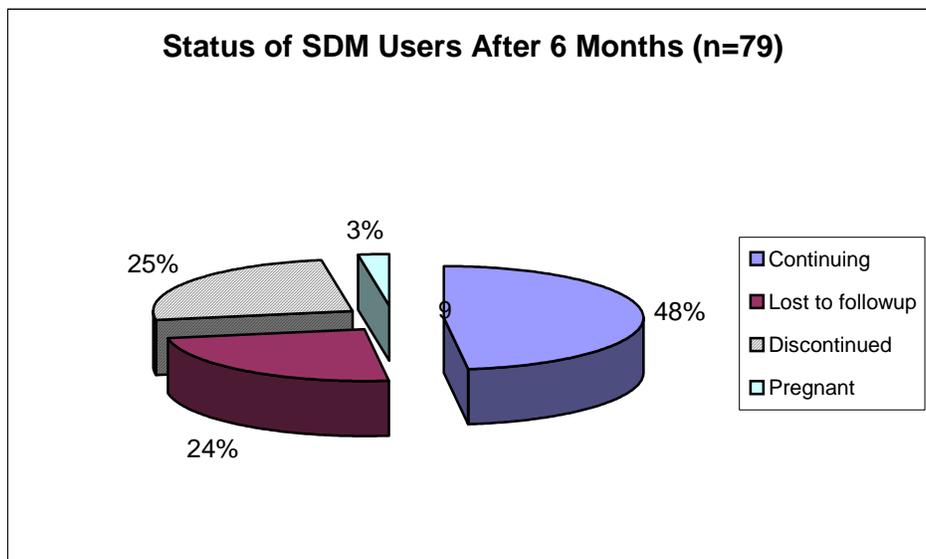
Economic reasons: These reasons were cited mainly by men, who felt that the weakening of the woman's health increases the amount that has to be spent on health care. The cost of the SDM is considered less expensive. As a male client at ABBEF who is continuing to use the SDM put it, *"With the necklace, I had a small amount of money, even if it was the money to feed the children, left in my pocket. But if you lose your health, it empties your pockets."*

Status of SDM Users Six Months after Enrollment

The status of the women enrolled in the study 6 months after the date of their enrollment is represented in **Figure 11**.

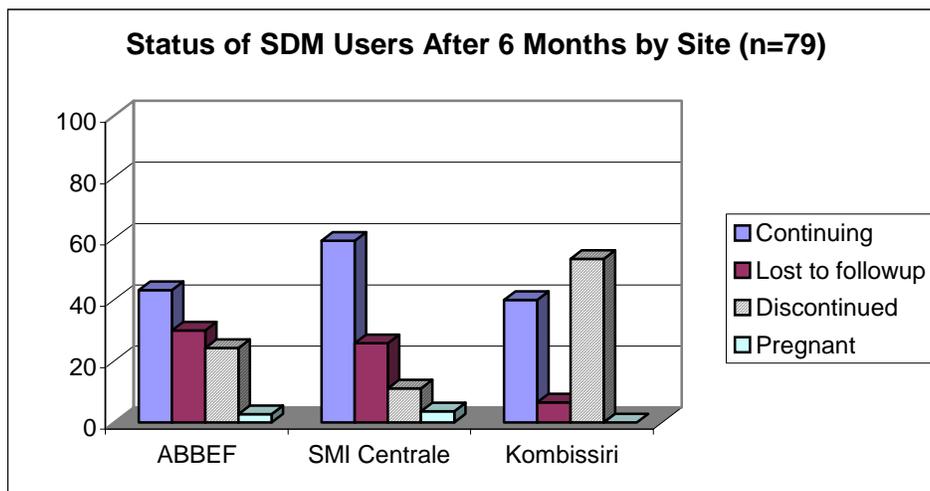
² *Tasbih* are Muslim prayer beads.

Figure 11. Status of SDM Users at 6-Month Followup (n=79)



As the figure above shows, approximately 48% of the SDM clients continued to use the method 6 months after enrollment in the study. Continuation of the method is presented by site in **Figure 12** below.

Figure 12. Status of SDM Users at 6-Month Followup by Site



Continuation rates were fairly similar across sites. At Kombissiri, there was a greater proportion of women who discontinued than continued the method, in contrast with the other two sites. However, the small sample of women there (n=15) makes it impossible to determine if there is any real difference between this site and the others.

A time to event (survival analysis) was also conducted to examine the dynamics of method continuation over time. Survival analyses were done for three events: pregnancy, not completing the first followup interview and not completing the second followup interview. The analyses were conducted for the total sample of female SDM users and stratified by site. The log rank test was used to test for differences between groups in stratified analyses. Two subjects became pregnant during the study. Eighteen subjects did not complete the first followup interview and 41 did not complete the second followup interview. Eighteen subjects

had no first or second visit followup data, but had dropout dates (lost to followup) that varied from 3 weeks (one subject) to 11 months after the admission date. For the purpose of this analysis, these 18 individuals were censored at 29 days after the admission date, with the exception of the individual having a dropout date 3 weeks after admission. That subject's dropout date was used for censoring since that date was prior to the 1-month followup.

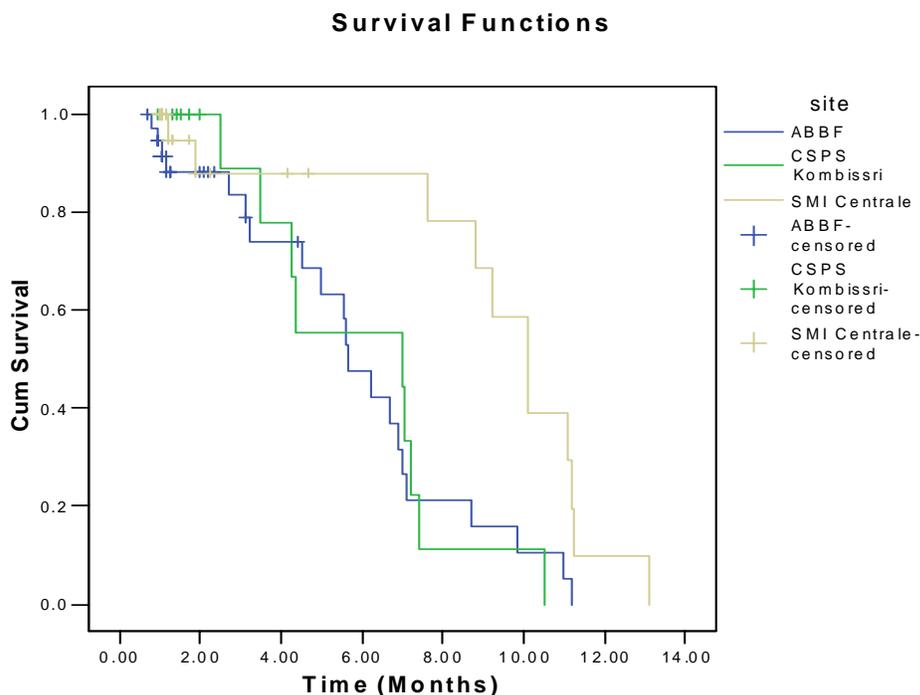
Results show there was a significant difference between sites for the event of not completing the second followup interview, $p=0.0066$, but not for the first followup interview. See **Table 9** below.

Table 9. Survival Analysis for Second Followup Interview

Months	0.76	3.11	4.26	5.55	5.65	7.64	9.22	11.07	11.24
% Completing second followup	98.7	83.9	76.6	66.3	61.0	34.5	26.5	10.6	2.6
The event rate at 6 months was 7.52%.									
The number of events = 41.									
The median time to the event was 7.01 months, 95% Confidence Interval (6.51, 7.51).									

When this analysis was stratified by site, findings showed that the ABBEF and Kombissiri sites had median times of 5.65 and 6.98 months, while the SMI Centrale site had a median time of 10.12 months. Results are presented below in **Figure 13** below.

Figure 13. Survival Functions for Second Followup Interview by Site



Since there were only two pregnancies, median times were not reached and no significant differences between sites were seen. Results are illustrated in **Table 10**.

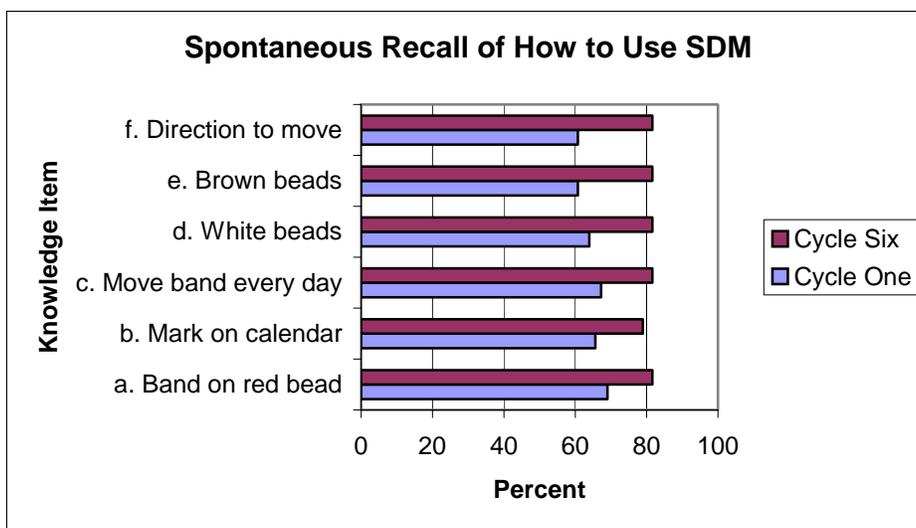
Table 10. Pregnancy Survival Analysis

Months	1.02	2.51	3.37	5.69
% Pregnancy-free	100.0	97.2	97.2	93.2

User Knowledge and Use of the SDM

Continuing users were asked to spontaneously recount to the followup interviewer after one (n=61) and six (n=38) cycles of use how to use the SDM correctly. Responses are shown in **Figure 14** below.

Figure 14. Knowledge of Correct Use of the SDM



Key: a= Placed black band on red bead when menstrual period began; b= Marked first day of menstruation on calendar; c= Moved the black band to next bead every day; d= Unprotected sexual relations not permitted during white bead days; e= Sexual relations permitted during brown bead days; f= Moved the black band in the right direction.

On the whole, among continuing users there was an improvement in spontaneous recall of how to use the SDM between the first followup interview (one cycle) and the second followup interview (6 cycles) for all six knowledge items assessed. These six items were also combined into a six-point knowledge scale and analyzed. The mean knowledge score was 3.9 (median=6.0) after one cycle and 4.9 (median=6) after six cycles. The mean score after one cycle for only those women who later completed the second followup interview (n=38) was slightly higher, 4.16 (median=6). When the mean scores after one and six cycles were compared for just those women who completed the second followup interview, the difference was not found to be statistically significant. These findings do lead to the conclusion, however, that knowledge of how to use the method exhibited an upward trend over the first 6 months of use.

There was some decrease in knowledge about when to avoid unprotected sex (the fertile days) between the first cycle (88.5%) and sixth cycle (81.6%), however, but it was relatively minor.

With respect to actual use, at each followup interview (after cycles one and six) with continuing users, the interviewer, after asking the woman a series of questions regarding where she currently was in her menstrual cycle, examined her CycleBeads to determine if the black band was on the correct bead. She also asked the client whether she moved the ring every day and

whether she had unprotected sex during her last cycle on the fertile days. These three questions were also used to develop a three-point scale of correct use of the method. Findings are presented below in **Table 11** below.

Table 11. Correct Use of the SDM

Correct Use Item	Respondents from First Followup (n=61)		Respondents from Second Followup (n=38)	
	n	%	n	%
1. Correct bead marked (interviewer observation)	57	95.1	36	94.7
2. Reported moving black ring every day, even during menstruation	58	95.1	36	94.7
3. Reported having unprotected sex during last cycle on white bead days (fertile window)	11	18.0	7	18.4
Correct Use Scale (3-point scale, items 1-3 above)	mean=2.7 (median=3.0)		mean=2.7 (median=3.0)	

Table 11 suggests that women’s self-reports about how they used the method, as well as the proportion of women who correctly moved the black band as verified independently by the interviewers, did not vary over time.

Participation of Male Partners

Involvement of the husband/partner in use of the SDM was high at both followup interviews according to female SDM users: 90.2% at 1 month and 86.8% at 6 months.

Men’s involvement in the use of the SDM, according to the women users interviewed, took the following forms:

- Men moved the ring from bead to bead themselves or reminded their partners to do so, or checked the position of the ring before each act of sexual intercourse.
- Men whose partners were illiterate marked the days of their partners’ menstrual periods on the calendar and took responsibility for checking the calendar in order to keep track of the days accurately.
- Finally, men took the initiative to ask or talk to their partners about whether or not it was time to have protected intercourse.

The partner's involvement in using the CycleBeads also reportedly facilitated the method’s use: *“Every day he asked me if I had moved the ring. That reminded me, in case I had forgotten.”* (User, age 33, from the Kombissiri health center) *“Every time she had her period, she would tell me so that I could immediately note it on the calendar in order not to forget.”* (Partner of a woman at ABBEF who stopped using the SDM)

One man noted, *“The necklace is not hidden like the other methods, which women generally keep hidden from their husbands. Agreement between the husband and the wife is imperative.”* (Partner of a woman at ABBEF who stopped using the SDM)

Management of the Fertile Days

It was the women, in most cases, who informed their partners of the existence of this new method of contraception and of the need to manage the fertile days. In general, management of the fertile days did not cause any serious conflicts for users because, as they pointed out, they had chosen the method with their partners' acquiescence.

Based on findings from the followup interviews with continuing users, however, consensus about days for sexual relations appeared to lessen somewhat with time. Consensus was reported to be 79% after the first cycle and 70% after the sixth cycle. Furthermore, 34% of women after the first cycle and 41 % after the sixth cycle said that they had real disagreements with their partners on managing the fertile period.

Management of fertile days was a problem cited by some SDM users during the focus group discussions with female and male continuers and discontinuers. The length of the fertile window was considered to be very long in general, and some men's reluctance to use condoms and the difficulty of practicing total abstinence reportedly made management of the fertile days difficult for some couples, particularly one couple where the male partner was away from home for extended periods of time. It should be noted, however, that the counseling protocol addresses this issue as well as other social and biological issues that may determine how appropriate SDM is for a specific couple.

Initially, abstinence was reportedly preferred to condom use among some male partners of SDM users. However, in practice, abstinence proved difficult, and more than half of users resorted to using other FP methods during the fertile days. Withdrawal was the most frequently used method, followed by condoms. *"The 12 days were not easy to get through. In the beginning, he preferred withdrawal to wearing a condom. Sometimes, he managed to hold out until the end."* (Female user at ABBEF who stopped using the method)

Another female user reported, *"As I was already using the rhythm method, when I explained to him [my partner] about the necklace, he agreed because he thought it was about the same thing. But in practice, he found that the waiting time was longer, and he was always asking me whether it was time yet."* (Female continuing user at SMI Centrale)

Difficulties linked to reluctance to use a condom were mentioned most often at the beginning, but with explanations, the problem was solved. *"For me, it wasn't easy in the beginning, because when the time came to abstain or use a condom, my husband was reluctant. But in the end, he agreed."* (Female continuing user at SMI Centrale)

Among male users, perceptions about the management of the 12 fertile days differed. Some men considered abstinence a good thing. It is not an unknown practice. Abstinence is seen as a way for men to strengthen the capacity for self-control as recommended by some religions. Abstinence encourages fidelity and facilitates direct contact during sexual intercourse because trust has been established. *"I don't like condoms, and I especially don't like using one in my own home. For me, self-control is not difficult because it's something I was doing before my marriage. For the health of my wife and the good of my family, we agreed to use the necklace."* (Male user at ABBEF who stopped using the SDM)

For other men, abstinence was considered good but difficult, and the length of the fertile period was found to be too long: *"When I agreed to the necklace, I didn't see the 12 days as a problem. But when you start using it, you realize that the 12 days are like 12 months."* *"Sometimes when the ring gets to the red bead, if you are not a man, sometimes exercising self-control is hard, it is really hard."* (Male user at ABBEF who stopped using the method)

Another male user pointed out his frustration with the length of the fertile period: *“Having to resort to withdrawal is frustrating. First you have 10 or 12 days—that’s half the month—when you have to abstain or use other methods that you don’t want to use. There’s a problem there, there’s something wrong with that.”* Not being able to abstain leads people to resort to condom use reluctantly: *“Sincerely, sometimes you say that you are going to be able to abstain, but then it can lead you to do something you don’t want to do, that is, reach for a condom.”* (Male user, age 56, at ABBEF who stopped using the SDM)

Occupations that require a great deal of travel away from home make the management of the fertile days even more difficult according to this male user. *“I’m away from home for two weeks, I abstain, I follow all the rules, I come back, and she tells me ‘Ah, we can’t right now or I have my period.’ It’s tiresome. I don’t like that, you know. I say, ‘Okay, we’ll just have to do without, but I’m going to sulk.”* (Male user, age 56, at ABBEF who stopped using the SDM)

All female users agreed that managing the fertile days and practicing abstinence is impossible if the man is drunk or under the influence of drugs: *“A husband who has been drinking may force his wife to have sex or pretend that he doesn’t know that it is a fertile day. But then some people say that alcoholics don’t like women at all. When they are drunk they only want to sleep.”* (Female user at SMI Centrale)

Gender and Dynamics of Couples Using the SDM

Gender Roles, Decision-Making and Use of the SDM

Dialogue between members of a couple to come to an agreement about management of the fertile days is one of the fundamentals of effective SDM use. Socio-cultural norms, including the subordination of women, often hamper communication within couples in Burkina Faso. The frequently limited degree of women’s liberty as members of the couple and the role of the man as principal decision-maker in most cases mean that women tend to have little power to negotiate decisions around sexuality.

To investigate gender roles within the couple, focusing on women’s status and household decision-making power with respect to sexuality and negotiation of condom use, a subset of female SDM users and their partners were administered a supplemental gender questionnaire after having completed their second followup interview. A total of 45 users were contacted, representing 56.9% of the members of the cohort (45 of a cohort of 79). Of these 45 SDM users, there were 31 women (19 who were continuing SDM users and 12 who had discontinued the method) and 14 men (five who were continuing users and nine who had discontinued). The women and men were asked if they agreed with a series of statements about gender relations (see **Table 12**) and who generally was the decision-maker with respect to a variety of issues (see **Table 13**). Not surprising, from the perspective of both men and women, men appeared to play the dominant role in decision-making in general. However, women appeared to have some input in decisions pertaining to sexual relations.

Table 12. Gender and Decision-Making: Agreement with Statements Made

Gender Item	% of Female SDM Users who Agree with Statement (n=31)	% of Male SDM Users who Agree with Statement (n=14)
If I ask my partner to use a condom, he would become violent.	48.4	28.6
If I ask my partner to use a condom, he would be unhappy.	38.7	28.6
Usually, my partner and I do what he would like to do.	83.9	42.9
My partner does not let me wear certain clothes.	58.1	85.7
When my partner and I are together, I am often silent.	19.4	35.7
My partner's opinion counts more than mine with respect to important decisions concerning us.	61.3	64.3
My partner decides who I can associate with.	19.4	35.7
If I ask my partner to use a condom, he would think I am sleeping with another man.	12.9	14.3
I feel trapped by our relationship.	22.6	7.1
My partner does what he wants even if he knows I do not want to do it.	22.6	14.3
I am more attached to our relationship than my partner.	41.9	78.6
If my partner and I disagree about something, he usually prevails.	58.1	35.7
My partner benefits more from the relationship than I do.	45.2	35.7
My partner always wants to know where I am.	64.5	28.6
I think my partner may be seeing another woman.	48.4	35.7

Table 13. Gender and Decision-Making: Who Decides?

Gender Item	% of Female SDM Users Who Said "Partner" (n=31)	% of Male SDM Users Who Said "Self" (n=14)
Who do you think generally has more power in decision-making?	90.3	78.6
Who usually decides with whom you can associate?	25.8	21.4
Who usually decides what you do together as a couple?	54.8	35.7
Who usually decides when you will talk about serious issues?	35.5	57.1
Who usually decides how often you will get together?	35.5	64.3
Who usually decides if you will have sexual intercourse?	41.9	57.1
Who usually decides whether to use a condom?	19.4	42.9
Who usually decides the type of sexual relations you have?	51.6	28.6

Condom use is the topic with the greatest differences in opinion between men and women respondents, both about who usually decides when to use a condom and the male partner's expected reaction if asked to use a condom. About half the female respondents (48.4%) said that their partner would have a violent reaction if they asked him to use a condom, while 38.7% said their partner would be annoyed/unhappy. In contrast, only 28.5% of male respondents said that they would react violently or be annoyed if their female partner asked them to wear a condom.

When asked how using the SDM had affected decision-making in their relationship with their partner, some women and men reported greater consensus and communication concerning the couple's decision about use of condoms and the timing and frequency of sexual relations. Findings further suggest that use of the SDM may have affected the women's and husbands'/partners' perceptions about condoms. In spite of the differences mentioned in matters of decision-making about use of the condom, men have become less reluctant to use it and their reactions have become more positive, according to some women respondents. All of the women said that their partner no longer makes reference to adultery if asked to use a condom. Women reported that, since initiating use of the SDM, they no longer think that their partners are hinting at infidelity when they mention use of the condom. Among men, 21.4% acknowledged that they no longer have a negative reaction to condoms and 28.6% no longer make unilateral decisions about sexual intercourse and condom use.

Very few differences were observed among the continuing women users (n=19) and those who had discontinued the method (n=22), with the exception of decisions about sexual relations. With the first group, it is always the man who decides, whereas the second group said that they and their partners decide together. Among the men, there were some different points of view among continuers (n=9) and discontinuers (n=5), but the sample size was very small. In the matter of decision-making concerning sexuality, men who had discontinued use of the SDM reported they were the sole decision-makers, whereas continuing male users more often reported seeking consensus with their wives.

Effects of Using the SDM on Couple Dynamics

One month after enrollment, 32.8% of women interviewed with the followup questionnaire (n=61) reported they had noted changes in their relationship with their partner as a result of using the SDM, compared with 28.9% of the continuing women SDM users (n=38) 6 months after enrollment. Principal changes noted were:

- Discussions about the woman's cycle
- Discussions about birth spacing
- Exchanges about sexuality in general
- Better communication even apart from questions relating to sex

In addition, focus group discussions held with women SDM users and their partners (three with female continuing users, one with female discontinuers and one with male discontinuers) revealed that, on the whole, the SDM improved rapport within some couples by strengthening communication and dialogue about sexuality, which has long been considered a taboo topic. The use of the SDM also gave women greater freedom and helped them to achieve a larger degree of control over their own sexuality. The couples welcomed these positive changes. By way of example, some of the benefits of the SDM mentioned by users are included below.

Female users cited the following benefits of using the SDM:

- Greater closeness, stronger love and harmony. Longer periods of abstinence required by the SDM made the woman seem more desirable during the brown bead days. A 29-year-old

housewife stated that during this period her partner became more attentive: *“He is happy and he brings me gifts.”*

- Dialog about sexuality. *“He would ask me what day of my cycle I was on and when we could have sex again.”* (Woman discontinuing at ABBEF)
- *“In my case, I was able to know what day I should or should not have sexual relations, to rest and communicate that to my husband. And on that day, he knew he would not bother me [demand sexual relations].”*
- Greater intimacy and trust within the couple.
- Negotiation and planning of sexual relations. Introduction of the SDM in the life of the couple brought the woman greater control over her sexuality. Being seen as a woman empowered and considered a partner rather than a sexual object, she participates in making decisions and her negotiating power for protected sex or use of condoms is somewhat improved. *“Before, when I used other methods, no one asked me if I wanted to or didn’t want to. But now, each time he asks me, ‘Is this a favorable time?’”*(a 41-year-old technician, using the SDM) *“Now we don’t have sex when you want to; now everything is structured.”* (Office worker, 44 years old, at ABBEF)

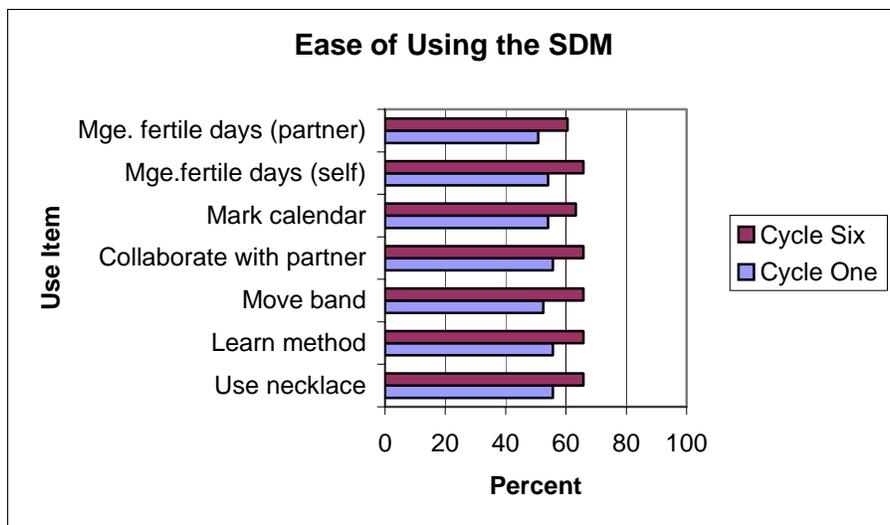
Among the male partners, harmony within the couple and communication about sexuality were the most frequently cited benefits:

- Bridging of the communication gap that exists between the man and the woman in a couple owing to socio-cultural factors and increased dialogue about sexuality. *“Before, I felt embarrassed or ashamed talking about sexuality with my wife, asking her if today was o.k. or not. Before, you didn’t talk about it, you just did it. But now we have to talk about it first.”* (Male SDM user at ABBEF)
- Family harmony. *“Conflict between my wife and me doesn’t go on and on because we are obliged to talk to each other now.”*
- Involvement of men, which ended the woman’s monopoly over contraception (unlike other methods in which the man had no say).
- Improvement in the man’s knowledge about his partner’s cycle.
- Use of condoms no longer associated with infidelity.

Ease of Using the SDM

Overall, the ease of using the SDM, as reported by female users (n=38 for cycle six, n=61 for cycle one), increased noticeably between the first and sixth cycles. Users were more at ease with use of the SDM after the sixth cycle as measured by their responses to six questions assessing their perceptions of how easy the method was to use. For each item, women were asked if they found a specific aspect of using the method easy or difficult. Those who replied "easy" are represented in **Figure 15**.

Figure 15. Ease of Using the SDM According to Female Users

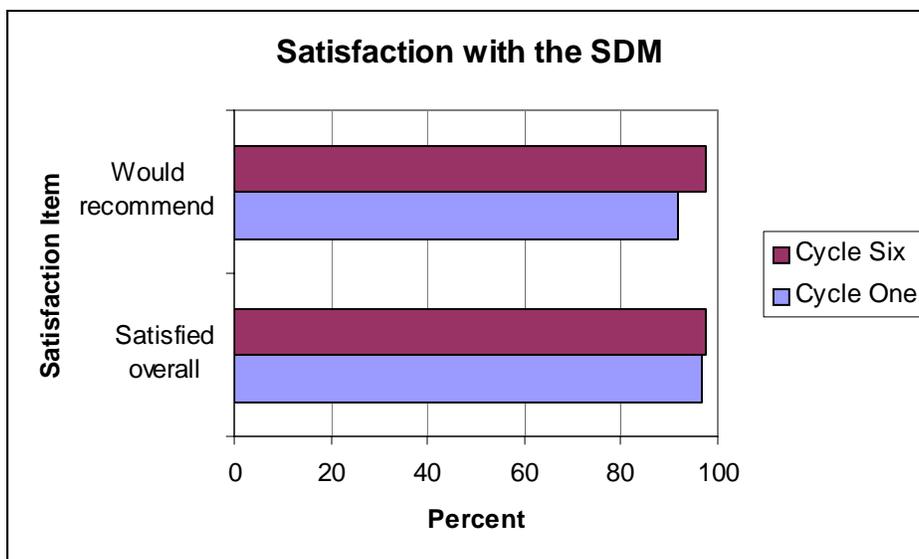


All aspects of method use that were assessed had a higher proportion of respondents who reported that it was “easy” after cycle six than after cycle one. Some SDM users commented that good instructions from providers, coupled with the use of the calendar as a reference in case they forgot to move the ring or to note the first day of a menstrual period, made the CycleBeads relatively easy to use. In addition, some SDM users were pleased with the similarity of the SDM to the rhythm method. Still, it must be noted that at least one-third of respondents to each item found that aspect of the method difficult to use.

Degree of Satisfaction among Users

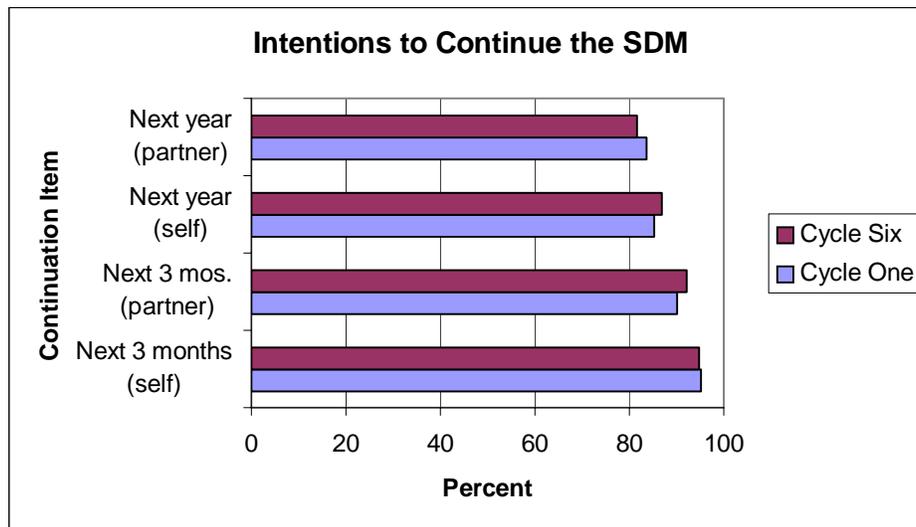
Satisfaction with the SDM was very high at both the first and second followup interviews among female continuing users (n=61 for cycle one and n=38 for cycle six), with more than 90% saying they were satisfied overall and would recommend the method to others (see **Figure 16** below).

Figure 16. Users’ Level of Satisfaction with the SDM



At both followup periods being considered, a clear majority of the respondents also expressed their desire to continue the method both in the next 3 months and over the next year, and believed their partners also wished to continue (see **Figure 17** below).

Figure 17. Intention to Continue the Method for the Next 3 Months and 1 Year



Discontinuers

Of the 79 women enrolled in the study, 25% (n=20) had discontinued using the method 6 months after enrollment in the study. The reasons reported for this in the discontinuation interview conducted with the women, in descending order of frequency, were (seven cases, 35%, were missing):

- Had two cycles or more outside the accepted interval range or an irregular cycle (n=10, 50%)
- Husband/partner did not want to continue (n=1, 5%)
- Wished to stop participating in study so stopped using method (n=1, 5%)
- Wished to use another method (n=1, 5%)

Unfortunately, seven of the 20 discontinuers did not participate in the discontinuation interview. In four cases, this was because the providers conducting the followup visit reportedly did not have a copy of the discontinuation interview available at the time of the second followup. In two cases, the reasons the interview was not administered are unknown. In one case, the woman was mistakenly classified as pregnant and administered the pregnancy interview but she had discontinued prior to her pregnancy.

One of the women who reported that she discontinued the method because she had three cycles shorter than 26 days also reported that she wished to become pregnant. Only three women (15%) reported that their partner was involved in using the method, but there were seven missing values.

Proportionally, there were more discontinuers among the sample of women from Kombissiri (53% of enrolled women there, n=8) than at other sites (24% at ABBEF and 11% at SMI Centrale). In the opinion of both the providers and the users themselves at Kombissiri, this situation is related to the women's poor understanding of their cycles, which makes preliminary evaluation very approximate. Many women are then dropped because their cycles are unsuitable for the study.

Focus groups were conducted with users and their partners who stopped using the SDM in order to better understand the reasons for non-use or abandonment of the method. Irregularity of the cycle was cited very frequently as a reason for discontinuation. Wanting to have a baby was given as the reason in one case.

With regard to irregularity of the menstrual cycle as a cause for abandonment of the SDM, three explanations emerged from the discussion:

- Women who were anxious to begin using the SDM were too quick to say that their cycles were within the regular range of 26 to 32 days.
- Women did not understand or had inadequate knowledge of their cycles.
- Women's cycles had been disrupted by earlier use of contraceptive methods.

Pregnancies

A total of two pregnancies (i.e., 2.5% of women admitted to the study) were recorded during the study among women who reported they continued to use the method. Both women reported moving the black band every day and marking the first day of their menstrual cycle on the calendar. Both women reported having sexual relations during the fertile period, with one woman reporting that her last cycle was longer than 35 days. The other woman reported that she had unprotected sex during the fertile days at the insistence of her husband, and only later realized it was a fertile day. When this same woman was asked how she reacted when her husband insisted on having sexual relations on a fertile day, she said she did nothing since she is "menopausal" (she is 42). Thus, one of the pregnancies appears to be due to improper use of the method (e.g., unprotected sex on a fertile day), while it is not clear exactly why the other woman became pregnant.

Neither woman's husband was away from home for any great length of time, and neither reported that alcohol caused any problem in avoiding unprotected sex on the fertile days.

User Perceptions of the Cost of the Cycle Beads

Almost all users found the price of the CycleBeads to be acceptable, given its advantages and how long it will last. *"At 500 CFA francs, the necklace is practically free, because it can be used for years without showing any wear and tear."* (User at the Kombissiri health center, age 33, housewife)

Compared with other methods, the SDM costs less to use over time: *"At 500 CFA francs, the price of the necklace is equal to five months' worth of pills, but the necklace can be used for years."*

Despite these statements, however, users said they would like to be able to obtain the CycleBeads for a lower price or, if possible, free of charge.

Perceptions of the SDM among New Family Planning Clients Who Did Not Choose the SDM

Thirty women FP clients, all of whom were offered but chose not to use the SDM, were asked their point of view on the method during a client exit interview at one of the three facilities participating in the study (10 respondents per facility). They first heard of the SDM from the media (radio and TV) (46.7%) or directly from the three FP centers in the study (40%). The FP methods the women reported using are shown in **Table 14**. Six women were not using any method at the time of the interview. Some women reported they had imposed their choice on

their partners (26.4%). Half (50%) of the women were not satisfied with the method they were using; in 26.4% of cases, that dissatisfaction was due to the method's side effects.

Table 14. Family Planning Method Use among FP Clients Who Refused the SDM (multiple response)

METHOD	ABBEF	SMI Centrale	Kombissiri	Total
Oral contraceptives (pills)	3	1	3	7 (23%)
Injectables	3	1	3	7 (23%)
IUD	2	0	2	4 (13%)
Norplant implants	0	1	3	4 (13%)
Condoms	2	1	0	4 (13%)
No method	0	6	0	6 (20%)

The respondents were asked their opinion about the SDM, including what they perceived as the advantages and disadvantages of the method and what they anticipated the effect of using the method would be on their relationship with their husband/partner. The non-users thought that the advantages of the SDM would be its simplicity; 56.6% mentioned that the method is natural and has no side effects, and 90% thought that their partners might be tempted by such a method because of the absence of side effects (23.33%). Finally, 76.7% said that such a method could become popular among, with some of these mentioning women for whom other methods are not suitable (19.8%), and others mentioning because it is natural (12.8%).

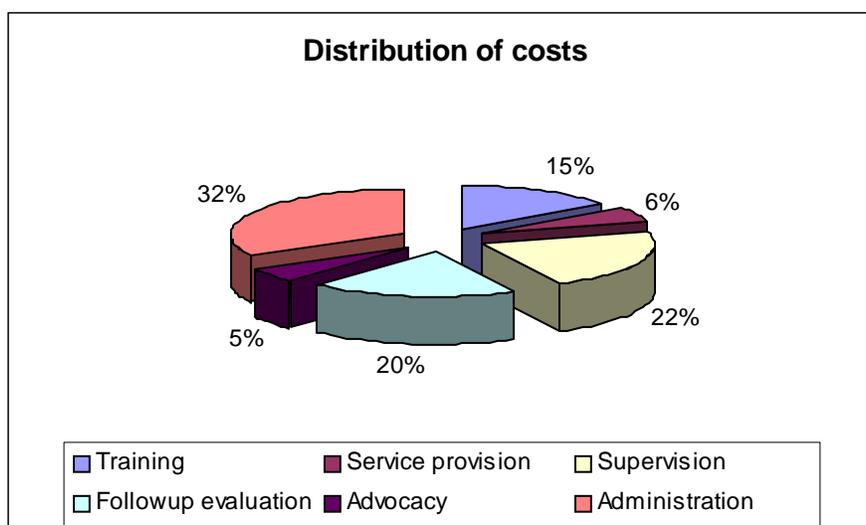
Possible difficulties of using the SDM that were reported were forgetting to count the beads (23.1%); husband's/partner's refusal to use a condom during the fertile days; and irregular menstrual cycles.

Anticipated effects on the relationship of the couple using the SDM included stronger communication about sexual relations (33.3%), the obligatory involvement of men (19.8%), and the potential for conflict as a result of the man's refusal to use condoms or practice abstinence if he is not sufficiently informed about the method (9.9%).

COST OF INTRODUCING THE SDM

An attempt was made to document the major costs of introducing SDM, including those related to training, followup evaluation, service provision, advocacy, supervision and administration. All costs are given in CFA francs. **Figure 18** shows the partial costs of introducing the SDM, as indicated by the details below. They do not include those related to obtaining the CycleBeads, which are an essential part of providing SDM services.

Figure 18. Costs of Integrating the SDM with Programs at the Three Sites



Training activities constituted 15% of total costs (see **Table 15** below). These are partial costs because they do not take into account costs related to support provided by the Institute for Reproductive Health and the Laboratory for Applied Studies in Development (Laboratoire d'études appliqués aux dynamiques du développement—LEADD).

Table 15. Training Costs

Item	Amount
Training of trainers	851 909
Training of providers	1 357 425
Total	2 209 334

Nevertheless, these costs give an idea of the charges that may be incurred in training of trainers and providers in a district. For training of 11 supervising trainers and 14 providers at the three sites, the cost was 88,374 F CFA.

Table 16 shows the costs associated with service provision. These costs do not include the cost of the CycleBeads.

Table 16. Service Provision Costs

Item	Amount
Printing of client cards	162 000
Manufacture of carrying bags for the CycleBeads kit	480 000
"Tools Review" meeting	186 697
Total	828 697

Table 17 shows the costs associated with supervision. These costs are fairly high for two reasons:

- Research needs
- Distance of service provision sites from supervisors' work sites

Table 17. Supervision Costs

Item	Amount
Site supervision	425 150
Quarterly meeting, March 2004	278 750
Quarterly meeting, June 2004	278 750
Tracking at each site	840 000
Expenses for monthly meetings	500 000
Site visits	402 600
Site supervision	425 150
Total	3 250 400

Tables 18, 19 and 20 below show the costs of monitoring and evaluation, advocacy, and administration and management of the research project. The costs shown here for monitoring and evaluation (for the operations research study) would not be nearly as high in the context of routine service delivery. Followup during routine service delivery would likely be integrated into the existing FP program and facilitated by the use of tools (such as the Knowledge Improvement Tool, developed by IRH) designed to help supervisors maximize provider performance outcomes.

Table 18. Monitoring and Evaluation Costs

Item	Amount
Mid-term evaluation	1 220 000
Final evaluation	1 668 760
Total	2 888 760

Table 19. Advocacy Costs

Item	Amount
SDM orientation workshop	553 250
Kombissiri meeting	203 350
Total	756 600

Table 20. Administration and Management of the Research Project Costs

Item	Amount
Office supplies	103 900
DHL courier service	284 920
Telephone, fax and Internet connections	36 925
Travel costs for financial manager (gasoline)	84 500
Photocopying and printing	26 250
Purchase of an adapter	1 000
Project manager's salary	4 331 976
Total	4 869 471

At this point, required costs to be anticipated for the integration process would be: 1) training of trainers, and 2) training of providers.

Costs for supervision and administration as well as for monitoring and evaluation and advocacy should be integrated with the costs related to other methods.

Mwangaza's total budget for carrying out the social mobilization component was \$22,279 (see **Table 21** below). In a fully integrated project, the costs would be lower since the activities would be integrated and there would not be costs for personnel, overhead, etc. divided between two different groups.

Table 21. Social Mobilization Costs

Item	Amount
Personnel	4 427 561
Development of messages and broadcast on TV/radio	3 363 822
Other IEC materials and messages	562 230
Transportation, fuel (by motorbike) and maintenance	1 338 107
Training of personnel at Mwangaza	412 115
Recruitment and training of community health workers	773 066
Supplies and equipment	281 115
Communication (phone/fax/e-mail)	112 446
Dissemination	375 007
Overhead (12.8%)	880 452
Total	12 525 921

Note: This included two community advisors for 8 months each, 30 community health workers for 6 months, and one community health advisor for 9 months.

DISCUSSION

Study findings suggest that SDM is an acceptable method to Burkinabé couples in the study and is feasible for introduction into existing FP services. The SDM appears to be a culturally acceptable FP method among users primarily because, similar to traditional methods with which approximately half of Burkinabé women and men of reproductive age report they are familiar, the method does not have any effect on the woman's health or disagreeable side effects. Among SDM acceptors, 58.6% and 20.7% reported that they chose the method for these two reasons, respectively. Another 19% of SDM acceptors mentioned that no medications or devices were needed, while 17.2% cited moral/religious considerations as the reason they chose the SDM. Furthermore, periodic abstinence is a method that was familiar to many SDM acceptors: 16.7% of respondents reported they had used periodic abstinence in the past, while 10.9% of respondents reported using it in the last 2 months.

The process of introducing the SDM into existing FP services at the three participating facilities was accomplished with few reported major difficulties. None of the participating providers left the study and they all said that they wanted to continue to offer the method. Participating FP providers reported effectively integrating provision of the SDM into their daily practice. SDM was incorporated systematically into the array of FP methods offered by the providers and was included as part of the general counseling provided to everyone who came to the facility seeking an FP method. The same rooms and service points were used for SDM services as for all other FP methods. Physical facilities, staff, equipment and scheduling did not require any modification. The providers all agreed, however, that the time devoted to counseling for the SDM is relatively long and necessitates adjustments in the organization of work. Teamwork reportedly made it possible to reduce the waiting time for women wishing to use the SDM or another method. As with any new method, however, the level of confidence that the providers have in discussing the method will affect the amount of time they devote to counseling, and thus the time required for counseling on the SDM might be expected to lessen over time as providers become more comfortable with the method and as clients gain familiarity with the method through IEC/BCC campaigns. Other difficulties mentioned by four of the providers included: women's lack of knowledge about their menstrual cycles; women's failure to keep followup appointments; and men's failure to participate in the counseling sessions. With respect to followup, in a typical service delivery context as opposed to the study context described here, followup would be less problematic as it would be less frequent, with only one followup visit for SDM users recommended. In addition, it may be unrealistic on the part of providers to expect men to attend counseling sessions for the SDM, as men rarely accompany their partners on FP visits. Rather, attempts should be made to reach men through appropriate IEC efforts.

At the 6-month followup, 48% (n=38) of users continued to use the method, while 25% (n=20) had discontinued, 24% (n=19) were lost to followup and 3% (n=2) became pregnant while using the method. Discontinuation of the method was reportedly related to several factors but chiefly to having had two cycles or more outside the accepted interval range or an irregular cycle: after two or three cycles, half of the discontinuers said they abandoned the method because their cycles were not suited to it. It would be worth investigating if these discontinuers did or did not go on to use another method, as even though their cycles may be irregular, they would most likely still get more protection from unwanted pregnancy from the SDM than from no method at all. The two pregnancies recorded among women who continued to use the method—2.5 % of the women admitted to the study—represent a relatively acceptable rate in view of the efficacy of other methods. The pregnancies were due to unprotected sex during the fertile days in one case and unreported reasons in the other case.

Knowledge of how to use the SDM exhibited an upward trend among continuing users between the two followup interviews, and correct use of the method appeared to remain consistently very high.

Overall, the ease of using the SDM, as reported by female continuing users, improved between the first (more than 50% said easy to use) and sixth cycles (more than 60% said easy to use). Satisfaction with the method among continuing users was very high at both the 1- and 6-month followup interviews: more than 90% of women SDM users reported being satisfied with the method and said they would recommend it to others.

Involvement of the husband/partner in use of the SDM was high at both followup interviews according to female SDM users

Dialogue between members of a couple to reach an agreement about management of the fertile days is fundamental to effective SDM use. Use of the SDM appeared to promote increased communication among couples about sexuality and condom use as part of the need to reach consensus on how to manage the fertile days. Consensus about days for sexual relations, however, appeared to lessen somewhat with time: consensus was reported to be 79% after the first cycle and 70% after the sixth cycle in the followup interviews with female users. Furthermore, 34% of women after the first cycle and 41 % after the sixth cycle said they had real disagreements with their partners on managing a fertile period.

The SDM may have affected the women's and husband's/partner's perceptions about condoms: men have reportedly become less reluctant to use condoms and their reactions have become more positive according to women respondents to the gender interview. Among men, 21.4% acknowledged that they no longer have a negative reaction to condoms and 28.6% no longer make unilateral decisions about sexual intercourse and condom use. Women reported that they no longer think their partners are hinting at infidelity when they mention use of the condom. Focus group discussions held with women SDM users and their partners further suggest that the SDM improved rapport within some couples by strengthening communication and dialogue about sexuality, which has long been considered a taboo topic.

Beyond prevention of pregnancy, the SDM appears also to be a method that can help women understand their cycles more accurately. This knowledge has implications not only for prevention of pregnancy but also for conception if a user later decides she wishes to become pregnant.

CONCLUSIONS AND RECOMMENDATIONS

Given the high level of unmet need for FP in Burkina Faso, efforts to respond to this unmet need must involve expanding the options available to women and to couples. Study findings suggest that introducing a simple and natural new FP method such as the SDM, which may be more culturally acceptable to certain clients, represents a viable strategy for expanding contraceptive choice in the country.

In light of these study findings, it would be useful to expand the availability of the SDM to other health care facilities in Burkina Faso. Expansion would require some modifications of the approach, including the training modules and supporting materials.

Users' Suggestions for Improving the SDM

The suggestions made by SDM users are provided below. Some of the suggestions are not cost-effective, such as making custom colored CycleBeads for the Burkina Faso program. CycleBeads are a simple tool but must be produced to exact specifications in order to result in a quality product and optimal use. CycleBeads consist of teardrop beads that enable the user to

move the o-ring easily in only one direction. The teardrop shape also ensures that the ring sits securely on each bead and is unlikely to slip off. CycleBeads are a relatively simple device in both design and manufacture. However, because of their critical use as a family planning method, best practices indicate that CycleBeads production requires attention to specific standards of quality. If a woman relies on the SDM (and CycleBeads) as her method of family planning, then producing CycleBeads that do not meet specifications or which are not tested in a rigorous, independent quality check can result in unwanted pregnancy (and eventually death or serious injury to the woman). Unfortunately, experience has indicated that programs without dedicated quality control systems resulted in high product rejection rates (over 10 percent). Thus mass production on a regional basis is a more viable production scenario. Most programs will find importation to be the most cost-effective option, particularly when costs related to managing the production and quality control process are taken into consideration.

SDM users' suggestions have been grouped into three categories below:

CycleBeads

- Change the ring.
- Switch the colors used to indicate fertile and safe days (dark beads should be used to indicate danger, white beads should indicate safe days).
- Automate the necklace like a watch or a clock that could either be worn on the body or hung up in the house to reduce the problem of forgetfulness.
- Adapt the necklace to different cycles.

Fertile Days

- Review the length of the fertile window.
- Shorten the 12-day length of the period.
- Give men a necklace (2 per couple) so that women can be more free.
- Emphasize abstinence over condom use.

Promotion of the SDM

- Make the SDM available in more health centers or dispensing sites.
- Raise awareness of the method; increase information and advertising.
- Create advertising spots in different languages, or without words for people who are illiterate.
- Use a gender approach in raising awareness (find men to do outreach and awareness-raising among men).
- Publicize the health advantages of the SDM more widely.

Recommendations for Scale-Up

In the future, if the Ministry of Health or private health care organizations decide to scale up the SDM in Burkina Faso, the following steps for introducing the method into existing FP services are recommended:

- **Promote the SDM in facility catchment areas:** At the beginning of the study, attendance at the FP clinics was low and there was little demand for the SDM because it was a new method with which women were unfamiliar. Promotional campaigns are needed when the method is introduced at a new facility to create demand in surrounding communities. SDM

users specifically recommended: creating advertising spots in different languages, or without words for people who are illiterate; finding men to do outreach and awareness-raising among men; and publicizing the health advantages of the SDM more widely. As part of these promotional efforts, different IEC strategies should be used to target men, such as informational flyers designed for men that are given to female clients to take home, radio program targeted at men, and community meetings that involve male leaders, so that men can support their partners to learn about and use the SDM. All IEC activities could be conducted using a multi-method approach because overall FP use in Burkina Faso is low, and FP programs in general could benefit from an intensified IEC campaign.

- **Revise approaches to provider training:** Training should be adapted to the level of preservice training or cadre of the provider. In Burkina Faso, auxiliary birth attendants need a longer period of training, and the content and duration of the modules should be revised accordingly.
- **Use revised eligibility criteria and other job aids:** Many women who expressed interest in using the SDM at the three study clinics were denied the method because they did not meet strict eligibility criteria. These criteria include denying the method to women who did not know the length of their menstrual cycle. This exclusion presents an unnecessary obstacle to method use and could discourage women from using any method at all. Based on study findings about SDM from other developing countries, IRH has developed revised job aids for providers and supervisors, including eligibility criteria for use by providers in the context of routine service delivery that uses a series of simple questions to assess cycle length and regularity and a “Knowledge Improvement Tool” that is intended to help supervisors structure their supervision visits. These job aids were shared with stakeholders in Burkina Faso at the meeting to disseminate findings from this study.
- **Re-examine followup strategies:** It is unlikely that it will be feasible to follow up SDM clients at their homes once the method is taken to scale. If that is the case, the initial counseling that SDM clients receive at the health facility must be of very high quality to ensure that they understand how to use the method. In addition, providers will need to strongly encourage women to return to the facility for followup. New strategies for followup (community approaches) should be explored as well.
- **Improve the process for procuring the CycleBeads:** The process for procuring the CycleBeads continues to be a concern to avoid stockouts. Authorities at the Ministry of Health would do well to allocate resources for the SDM in their plans for financing contraceptives. Currently, IRH is working with USAID/Washington to facilitate the procurement of CycleBeads at the lowest unit price.

Recommendations for Similar Studies in the Future

- **Importance of promoting the SDM in facility catchment areas:** At the beginning of the study, enrollment was low due to several factors. Attendance at the FP clinics was low during this time because it was the rainy season. In addition, there was little demand for the method. Thus, the study coordinators conducted a promotional campaign that included community/social mobilization activities as well as a TV spot that aired in Mooré and French. This promotional campaign greatly increased demand for the SDM, and attendance at FP clinics increased at the end of the rainy season.
- **Strategy for home-based visits:** Since few women returned to the clinic for pre-arranged followup visits, it is imperative that providers and study coordinators have a system to follow up women at home. To do this, it is essential that providers obtain exact contact information for all enrolled women in order to follow up with them, either at the clinic or at home.

- **Continued supervision of providers:** Supervision is crucial to ensure that providers retain technical knowledge as well as complete study forms appropriately.

APPENDIX

ORGANIZATION OF FAMILY PLANNING SERVICES BY FACILITY

SITE ORGANIZATION

The organization of FP services varies from site to site, depending on available resources. The SDM was integrated into routine delivery of FP services at each clinic. Therefore, at each site, staff members have different functions related to the SDM.

Table Appendix-1. Organizational Model, by Site

Site	Clinic Organizational Structure	Provider Tasks Related to SDM	Followup Provider/ Agent Tasks Related to SDM	Other Tasks Related to SDM
ABBEF	<ul style="list-style-type: none"> <input type="checkbox"/> Staff dedicated to FP <input type="checkbox"/> All FP staff are trained in SDM <input type="checkbox"/> Two agents provide SDM followup services 	<ul style="list-style-type: none"> <input type="checkbox"/> FP logbook <input type="checkbox"/> Client card <input type="checkbox"/> Consent form 	<ul style="list-style-type: none"> <input type="checkbox"/> Admission form <input type="checkbox"/> Identification form <input type="checkbox"/> Followup questionnaire <input type="checkbox"/> Pregnancy interview <input type="checkbox"/> Lost-to-followup form <input type="checkbox"/> Discontinuation interview 	<ul style="list-style-type: none"> <input type="checkbox"/> Central organization of forms <input type="checkbox"/> Organization of appointments
CSPS Kombissiri	<ul style="list-style-type: none"> <input type="checkbox"/> Staff dedicated to FP <input type="checkbox"/> All FP staff are trained in SDM <input type="checkbox"/> One agent provides SDM followup services 	<ul style="list-style-type: none"> <input type="checkbox"/> FP logbook <input type="checkbox"/> Client card <input type="checkbox"/> Admission form <input type="checkbox"/> Consent form <input type="checkbox"/> Identification form 	<ul style="list-style-type: none"> <input type="checkbox"/> Followup questionnaire <input type="checkbox"/> Pregnancy interview <input type="checkbox"/> Lost-to-followup form <input type="checkbox"/> Discontinuation interview 	<ul style="list-style-type: none"> <input type="checkbox"/> Central organization of forms <input type="checkbox"/> Organization of appointments
SMI Centrale	<ul style="list-style-type: none"> <input type="checkbox"/> Staff members provide all primary health care services and work on rotating teams with one team that offers FP every day; each FP rotating team has at least one person trained in SDM <input type="checkbox"/> Two providers offer SDM followup services 	<ul style="list-style-type: none"> <input type="checkbox"/> FP logbook <input type="checkbox"/> Client card <input type="checkbox"/> Admission form <input type="checkbox"/> Consent form <input type="checkbox"/> Identification form 	<ul style="list-style-type: none"> <input type="checkbox"/> Followup questionnaire <input type="checkbox"/> Pregnancy interview <input type="checkbox"/> Lost-to-followup form <input type="checkbox"/> Discontinuation interview 	<ul style="list-style-type: none"> <input type="checkbox"/> Central organization of forms <input type="checkbox"/> Organization of appointments and home visits

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