

AWARENESS Project
Comparison of Standard
Days Method® User Tools



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The Institute for Reproductive Health
Georgetown University
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The *Institute for Reproductive Health* with Georgetown University in Washington, D.C., is a leading technical resource and learning center committed to developing and increasing the availability of effective, easy-to-use, natural methods of family planning.

The purpose of the AWARENESS Project was to improve contraceptive choices by expanding natural family planning options and developing new strategies and approaches to increase the reproductive health awareness of individuals and communities in developing countries.

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The AWARENESS Project

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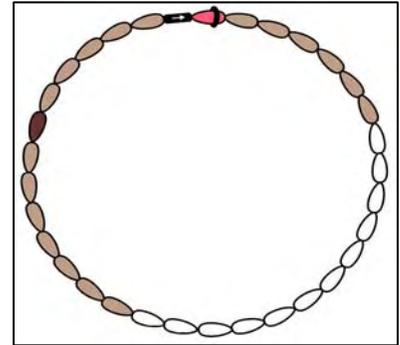
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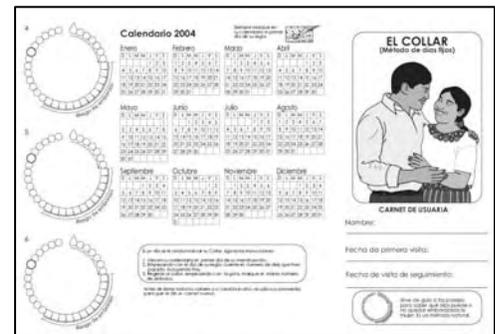
EXECUTIVE SUMMARY

The Guatemalan Ministry of Public Health and Social Assistance (MOH) collaborated with Georgetown University Institute for Reproductive Health (IRH) to conduct a study comparing two service delivery tools for providing the Standard Days Method® (SDM). The tools were CycleBeads® and a user card printed on paper with an image of CycleBeads and instructions for use. The study, implemented by APROVIME, a local NGO experienced in family planning service delivery research, compared provider and user perspectives, correct use, couple communication, and costs.

An advantage of the SDM is that, unlike other modern methods, a contraceptive commodity is not required. However, to facilitate teaching and simplify use of the SDM, IRH developed CycleBeads as a visual aid. CycleBeads are very low-cost and, unlike many family planning methods, involve only a one-time purchase. However, because even this minimal cost could be problematic in some settings, it was decided to test a “user card” as an alternative tool to facilitate use of the SDM.



The user card developed by IRH for this purpose included instructions and an image of CycleBeads using different shapes to help women track their menstrual cycle, identify their fertile and infertile days, and know when to visit a provider. The user card has been pre-tested and validated in selected sites in Guatemala, El Salvador, Bolivia, and the Philippines. The results indicate that the instructions and concepts on the user card are clear, and that the paper image of CycleBeads facilitates the woman's ability to track her cycle and identify fertile and infertile days¹.



In spite of the fact that CycleBeads are extremely low in cost (approximately US\$1) for a necklace with an estimated life of two plus years, they have not been provided as a donated commodity by USAID or other major donor. As demand for the SDM has increased, financially hard-pressed governments have asked whether there are cheaper alternatives to CycleBeads and whether the SDM could be offered as well with a lower cost alternative. These questions were the genesis of this study which compared teaching and use of the SDM with CycleBeads and a paper user card.

APROVIME collaborated with IRH in conducting the study, which took place over a 20 month period. APROVIME was responsible for project implementation with assistance from IRH. Service delivery points representing urban, peri-urban and rural communities were selected in three departments in Guatemala (Solola, Santa Rosa and Quetzaltenago), and all providers at these sites were trained to offer the SDM using both the user card and CycleBeads. Users who were randomly assigned to either the

¹ “Standard Days Method: Field Test of the User Card”, Elena Hurtado and Vivian Jiménez, March, 2004.

card or CycleBeads study group received similar counseling and explanations of correct use using CycleBeads.

The study used an experimental design, and users were randomly assigned to one of the two study groups. Once the counseling was completed and the client selected the SDM, the providers explained the study including the fact that participation in the study meant that they could receive either CycleBeads or the user card. Clients who chose not to participate in the study received the tool of their choice. If the client agreed to participate, the provider opened an envelope containing either CycleBeads or a user card.

Data collection included service statistics, provider interviews, observations of counseling role plays, admission interviews, follow-up interviews after one, four and seven months of use, focus groups with users, and cost information on both methods.

The 614 women who participated in the study in the three districts were similar in age and educational level and more than a third had not previously used a family planning method. The women in both groups quickly grasped how to use either the user card or CycleBeads, found the method easy to learn, and made few errors in identifying their fertile period. They also complied equally well with instructions for using the method. Couple communication also improved in both groups between admissions and exit, though users of the card showed a statistically significant difference at the exit interview. Women in both groups were nearly unanimous in reporting that their husbands participated in the use of the method. While few husbands actually moved the ring or marked the squares on the card, twice as many husbands in the CycleBeads group reminded their partners to mark the calendar. This difference was significant at .001 level and perhaps can be explained by the reported attractiveness of CycleBeads.

While few respondents indicated at the follow-up visit that they no longer had the tool they were given, there was a statistically significant difference between the two groups with more card users requiring replacements. During the exit interviews, more than half of the women in the user card group wanted to switch to CycleBeads stating that they found CycleBeads more durable, easier to remember to use, or more attractive. No women wanted to switch from CycleBeads to the user card. More than 95% in both groups, however, indicated that they planned to continue using the SDM. A large majority of women also indicated that they would recommend the method to other couples, and there was a statistically significant difference between the groups in favor of women in the user card group.

Providers proved to be equally competent in offering both tools, and an overwhelming majority believed that the tools were appropriate for their clients, easy to use and helped to engage the male partner in the use of a family planning method. The user card, however, was seen by providers as less attractive and more difficult for their clients to use than CycleBeads. The table on the next page describes the differences reported.

Provider attitudes towards SDM tools	CycleBeads N = 47	User card N= 47
Easy to explain to clients	97.8	86.4
Attractive	97.7	41.9
Appropriate for clients	95.3	60.5
Tool engages husband in method	93.2	72.7
Easy to use	73.8	53.5
Mean score (sd)	4.28 (1.14)	2.91 (1.49)

Providers also proved to be somewhat more competent in providing correct information to women using the CycleBeads in comparison to those using the card.

In spite of the fact that there were some significant differences between the groups, on the parameters of acceptability, husband involvement and provider attitudes the differences were small and both tools proved to be equally effective in helping couples use the method successfully.

Although the user card was found to be less attractive and durable by both users and providers, it was also found to be less expensive even when replacement costs for the card and bulk purchasing for CycleBeads were considered. The user card thus offers a viable option for offering SDM in resource constrained situations. However, a number of other issues should be taken into account. Because the user card perceived to be less appealing than CycleBeads, there may be other costs like appeal to new users and long-term continuation that are difficult to calculate. The cost of the card assessed in this study is based on a one-page, two-sided standard paper card with images for six cycles. The potential for increased loss of the card, and thus replacement costs, if the client receives two cards when she is counseled on the method; the additional cost to the client and the program of a return visit to obtain a new card were not considered in the study. Any of these alternatives might balance the ledger between CycleBeads and the user card.

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1. INTRODUCTION

1.1 Overview

This study was designed to compare two service delivery tools - CycleBeads® and a user card with an image of CycleBeads - for providing the Standard Days Method® (SDM) of family planning. This research examined acceptability (by providers and clients), user perspectives, couple communication, correct use, continuation, and costs. The Guatemalan Ministry of Public Health and Social Assistance (MOH) and the Institute for Reproductive Health (IRH) at Georgetown University collaborated on this study. Funding support was from the United States Agency for International Development (USAID) to IRH directly. The MOH is the primary provider of reproductive health and family planning services in the country, and the SDM is one of the methods offered by their family planning program. The study was coordinated at the central level with the MOH Reproductive Health Unit and at the departmental level with health centers offering the Standard Days Method. APROVIME, a local NGO with expertise in family planning service delivery research, was contracted to work with the MOH to implement this study.

The SDM (or the “Collar” as it is commonly known in Guatemala) is based on the known “fertile phase” during every woman’s menstrual cycle - the days during which a woman can become pregnant if she has unprotected intercourse. The method is appropriate for women who usually have menstrual cycles between 26 and 32 days long and identifies the fertile phase as days 8 to day 19 of the cycle. Couples using the SDM method abstain from intercourse or use a barrier method during the fertile days.

Currently, access to the SDM is being expanded in a number of countries, including Guatemala, where IRH has collaborated with the public and private sectors to include the SDM into the range of methods currently being provided. Some NGOs involved in social development in Guatemala, but with limited or no previous experience in providing family planning services, are also offering the SDM with positive results.

An advantage of the SDM is that, unlike other modern methods, a contraceptive commodity is not required. However, to facilitate teaching and simplify use of the SDM, IRH developed CycleBeads—a string of colored beads—as a visual aid (see appendix for an image of CycleBeads). CycleBeads are very low-cost and, unlike many family planning methods, involve only a one-time purchase. However, because even this minimal cost could be problematic in some settings, it was decided to test a “user card” as an alternative tool to facilitate use of the SDM. The user card developed by IRH for this purpose included instructions and an image of CycleBeads using different shapes to help women track their menstrual cycle, identify their fertile and infertile days, and know when to visit a provider. The user card is in black and white and uses symbols instead of colors to identify the different days of the menstrual cycle (see appendix for image of the user card). The user card has been pre-tested and validated in selected sites in Guatemala, El Salvador, Bolivia, and the Philippines. The results indicate that the instructions and concepts on the user card are clear, and that the paper image of

CycleBeads facilitates the woman's ability to track her cycle and identify fertile and infertile days².

The user card had not yet been tested in comparison to CycleBeads for acceptability, correct use, and continuation, nor had issues of feasibility and acceptability been tested in a typical service delivery setting. This study addresses these issues in order to provide guidance to programs considering use of the user card.

1.2 Immediate problem

Guatemala is the most populated country in Central America, with 12.7 million people, 39% of whom reside in urban areas. More than half of Guatemalans descend from indigenous Mayans. Many indigenous Guatemalans incorporate traditional forms of worship into Catholicism, the religion of 60% of the population. The most currently available national survey data revealed that total fertility rates had declined from 5.0 children per woman in 1998-99 to 4.4 children in 2002, but this conceals substantial urban-rural differences (3.4 urban vs. 5.2 rural)³. Contraceptive prevalence was 43% overall, but much higher in urban areas (56.7%) than in rural areas (34.9%). About 79% of total use was of modern methods, with female sterilization continuing as the most widely used method among married women (16.2%). More than 20% of users rely on traditional methods⁴.

Survey data in Guatemala suggest that most women are aware of at least one modern family planning method (96%). Women who are least knowledgeable about family planning and least likely to use modern methods reside in rural areas, belong to indigenous groups, and have no formal education. Among the indigenous population, about 16% of women in union use a modern method of family planning, while almost 6% (30% of users) rely on traditional methods, largely periodic abstinence (ENSMI 2002). Overall, more than 85% of indigenous married women ages 15-49 do not use a method of any kind, despite the fact that nearly 40% report that they do not want any more children or that their last pregnancy was unwanted or mistimed.

Other studies have demonstrated that indigenous women and men acknowledge the disadvantages of not spacing their children, but tend to reject modern contraceptive methods. Many say that they are interested in using natural methods; nonetheless, they lack the necessary knowledge to use natural methods correctly. As a result, unmet need for contraception among the indigenous population is rising as desires to space and limit the number of children increases in the absence of sufficiently expanded access to services and methods that meet their needs. As of ENSMI 2002, 39.3% of indigenous women in union had an unsatisfied need for contraception. More than half of this unmet demand was for spacing.

The clear relationship between birth spacing and infant mortality is well illustrated in Guatemala, where an infant born two or more years after the last birth is about 35% less

² "Standard Days Method: Field Test of the User Card," Elena Hurtado and Vivian Jiménez, March, 2004.

³ National Maternal and Child Health Survey, ENSMI 2002

⁴ Guatemala Encuesta Nacional de Salud Materno Infantil 2002, October 2003.

likely to die than an infant born a year or less after the previous birth. The infant mortality rate of infants born three years after a previous birth is nearly half that of those born a year or less after a previous birth (58 vs. 30). While infant mortality in urban areas declined by nearly 30% over the 15 years between the 1988 and 2002 surveys, in rural areas the decline was insignificant (from 49 to 48 deaths per 1000 live births) and infant mortality remains more than 20% higher among the indigenous as compared with the Ladino population.

1.3 Justification for study

These survey results suggest that expanding access to all methods, but particularly to methods acceptable to the indigenous population, would benefit women, children and families in Guatemala. The high unmet need for family planning among the Mayan population was also substantiated in a study conducted by the Population Council in the Guatemalan highlands. This study revealed relatively low levels of knowledge about contraception. Although the majority of women interviewed reported that they did not want to have another child in the next two years, only one out of five (20%) were doing something to prevent a pregnancy. A substantial portion of women perceived some contraceptive methods as potentially dangerous to their health. In spite of the successful introduction of the injectable in the area where the study was conducted, 45% of family planning users were more trusting of traditional methods. Data collection did not include the number of women using an effective natural method such as the SDM or the Billings Ovulation Method. However, given that only 27% of traditional method users could correctly identify the most fertile phase of their menstrual cycle, it is clear that many women could benefit from better information.

The negative perceptions about modern contraception documented in this study and in the ENMSI suggest that these perceptions constitute a barrier for the provision of reproductive health and family planning services in Guatemala. This barrier must be overcome through providing clients with more accurate information and a broader range of methods. The SDM is appropriate to alleviate part of the unmet need given that it has no side effects, is economical, and can be used by couples who reject other methods for religious, health, or cultural reasons. Previous studies conducted in Guatemala have shown that the SDM is well accepted among the population and has the potential to be used by many women. Until now, the principal constraint to its broader introduction has been related to the requirements for training and the supply of CycleBeads.

Unlike many other contraceptive commodities used in Guatemala, CycleBeads currently are not purchased by USAID or other donors. While CycleBeads are extremely low in cost when compared to other contraceptive commodities and, as a one-time purchase, are the lowest-cost user controlled method per CYP, the lack of donated supplies appears to be a barrier in some settings⁵. Provision of CycleBeads can be an obstacle for private or governmental organizations that want to offer the SDM to their clients. In addition to cost, these institutions may also need to address logistical obstacles to

⁵ James Gribble, "Mind the Gap: Responding to the Internacional Funding Crisis in Family Planning," The Journal of Family Planning and Reproductive Health Care 2004, 30(3): 155-7.

guarantee a steady supply of CycleBeads to their clients – a challenge in settings with weak logistical systems where stock-outs of contraceptive supplies occur frequently.

The purpose of this study is to test and compare the user preference, successful use, and cost of a paper SDM user card as an alternative to CycleBeads. If the user card appears comparable and costs less, it may help to eliminate the barrier that an inadequate supply of CycleBeads represents.

It should also be noted that the on-going economic, social, and political crisis occurring in Guatemala has considerably reduced economic capacity, particularly among medium and low-income groups. The increase in contraceptive prices has also affected APROFAM, the leading family planning NGO in Guatemala. In the public sector, the MOH and the Guatemalan Social Security Institute (IGSS) face resource constraints and do not have sufficient funds to purchase contraceptive supplies. The situation is so serious that IGSS had temporarily suspended the provision of family planning services to its beneficiaries. For these reasons, if the SDM can be delivered as effectively and at less cost with the user card in comparison with CycleBeads, the study may have important implications for the expansion of SDM services in Guatemala and other resource-constrained countries.

If both methods prove to have comparable levels of acceptability, correct use, and continuation, a more economical user card would benefit women with limited resources, women in rural areas, or those who have never used or have discontinued use of a modern method due to side effects, fear of side effects or for economic reasons. If, on the other hand, acceptability, correct use, and continuation are significantly higher with CycleBeads, or costs of the two tools are comparable, health officials may be motivated to purchase CycleBeads.

1.4 Objectives

The general purpose of the study is to compare the acceptability, correct use, continuation, and cost-effectiveness of two aids/tools to facilitate the correct use of the SDM: the user card and CycleBeads.

Research Objectives

- Compare the acceptability among providers of the two user aids/tools for the SDM—the user card and CycleBeads.
- Compare acceptability, correct use, and continuation among users for the two user aids/tools.
- Determine if one tool is more effective than the other in facilitating couple communication and male participation in the identification and management of the fertile days.
- Determine if there is any difference in method continuation and satisfaction at the end of four months associated with use of either tool.
- Compare the cost-effectiveness of providing SDM with CycleBeads and the user card.

1.5 Implementing partners

Our implementing partner for this study was APROVIME, a local non-profit NGO based in Guatemala City, which has worked with IRH on past studies. APROVIME's staff has over 15 years of experience in quantitative and qualitative research in reproductive health. In addition to its research experience, APROVIME has a close relationship with key MOH officials, which facilitated the process for approving the study and maintaining interest and support.

2. INTERVENTION

2.1 Strategy/Intervention

The study took place in the departments of Solola, Santa Rosa, and Quetzaltenango. Santa Rosa is predominantly Ladino, and Quetzaltenango and Solola are Mayan communities. Within these three departments, or health areas, service delivery points were selected to ensure that urban, peri-urban, and rural communities were represented. These were areas where the SDM had not been widely introduced and MOH personnel had not received in-depth training on the method. The number of service delivery points included in the study was determined by the volume of SDM users predicted to be served by the health centers and posts, based on a review of MOH service statistics and discussions with health center personnel.

All providers at the service delivery points, including doctors, nurses and community health workers, were trained to offer the SDM using both the user card and CycleBeads. However, in order to minimize the influence of provider profile on study results, follow-up interviews were only conducted with clients who were provided the method by auxiliary nurses, the most common family planning provider in Guatemala. Whenever feasible, other staff referred potential SDM clients to the auxiliary nurses. We did not modify the system that is currently used for the provision of contraceptive services, but rather included the SDM into the existing range of methods.

2.2 Implementation plan

The study took place over a 20-month period in the three departments. APROVIME was contracted to work with the MOH to implement the study. The MOH identified the health centers for the study, and personnel from these centers participated in the study. APROVIME was responsible for ensuring that all planned activities were implemented and that study procedures were rigorously followed in order to yield high quality data. It was also responsible for preparing progress reports and maintaining contact with IRH.

During the first month, personnel were hired, study materials and instruments were designed, informational meetings were held with MOH staff in the study areas, and SDM training was planned. In the second month, MOH personnel were trained by APROVIME to provide the SDM. Service delivery and data collection were begun soon afterwards. APROVIME hired a Project Coordinator with experience in conducting quantitative and qualitative research in the sexual and reproductive health field to supervise study activities. APROVIME was in constant communication with the MOH at

the central and local level, providing technical support and monitoring the progress of project activities.

IRH provided technical assistance through field and clinic visits and via telephone and email. Specifically, the Institute provided support in materials development, service delivery, data collection, and analysis. This included working closely with the Project Coordinator during study implementation. The Institute provided support to the training of providers and interviewers.

Provider training

A training protocol was used to train all providers to offer the SDM using both tools. Providers were instructed to follow procedures to ensure that study participants provided informed consent and were properly enrolled in the study. Georgetown University's Institutional Review Board reviewed and approved the study protocol and informed consent procedures. Providers received an explanation of the randomization process, data collection procedures, and how to handle administrative issues associated with the study. The two-day training sessions were facilitated by IRH, and the research was overseen by APROVIME.

A half-day follow-up training workshop was offered to personnel after they had been providing services for about two months. The objective of the workshop was to provide refresher training on any study or service delivery issue that had been identified as problematic during regular supervision visits and to adjust strategies as needed. This workshop included a role-playing exercise in which providers counseled simulated clients on SDM and the two user tools while observers noted their interaction utilizing a structured check-list. These observations provided information to compare provider competence in explaining the user card and CycleBeads. Any weaknesses identified during the role plays were addressed in the training. These workshops were coordinated by APROVIME.

Promotion and IEC

The MOH incorporated the SDM into regular IEC activities, including educational sessions conducted in waiting rooms, information provided during consultations, radio spots, home visits, educational talks in the community, and distribution of informational materials such as posters and brochures. The posters were distributed to churches, stores, and community homes. The brochures were distributed during educational sessions. The materials utilized for IEC and awareness raising activities were the same as those currently used in SDM provision in Guatemala.

Counseling

All users received similar counseling, with an initial explanation of the SDM followed by an invitation to participate in the study. If the user consented, she received instructions on how to use the method using either CycleBeads or the user card depending on which tool to which she was randomly assigned. The providers had the following materials:

- Laminated calendar to support calculation of the length of the menstrual cycle.
- Memory aid and/or counseling guide.

3. METHODS

3.1 Design

The study used an experimental design in which users were to be randomly allocated to one of two study groups: CycleBeads or user card in a 1:1 ratio. The sample was stratified by rural, urban, and peri-urban areas within each department in an attempt to maximize the probability of equal weighting of rural and urban and Mayan and Ladino users. In order to have sufficient power to detect a difference of 0.2 (two-sided test, 0.05 significance level) a minimum of 600 study participants (300 per study group) were required. Recruitment took place over a period of six months with an additional six months of user follow-up and additional months for data entry, cleaning, analysis, and report reporting.

After providing the initial explanation of the SDM, providers explained the study, including the fact that participation meant that the tool they received for using the SDM could be either CycleBeads or the user card. If the client declined to participate in the study, she received the tool of her choice, and the provider maintained a tally of the tools they chose.

If the client agreed to participate in the study, the provider opened an envelope, which contained a paper that read either “CycleBeads” or “user card”, and continued counseling accordingly. Thus, depending on the envelope drawn by the provider, the user took home either CycleBeads or the user card as a tool to use the SDM. The CycleBeads user group also received a small calendar while the user card group received a card with an integrated calendar and instructions.

3.2 Informed consent

If the client expressed willingness to participate in the study, the admission interview for the study was conducted by the provider at the end of the consultation. Researchers were required to respect the privacy and confidentiality of all participants through the informed consent process. All study participants signed an informed consent form that explained: 1) the purpose of the study; 2) what the client’s participation required; 3) the risks and benefits of the SDM and the availability of other family planning methods; 4) how the confidentiality of the participant would be maintained; 5) the right to refuse to participate in the study without affecting the client’s relationship with the institution or with individuals affiliated with the research; 6) the client’s right to refuse to answer any question during the interview; and 7) the client’s right to leave the study at any time. The instrument was designed to be appropriate for the education level of the target population.

Confidentiality and anonymity were maintained through standardized study procedures, including the storage of the instruments with personal identities in locked file cabinets.

IRB approval for the study was obtained from Georgetown University’s Institutional Review Board and locally in Guatemala.

3.3 Variables, data collection, and analysis plan

The study aimed to establish or dispute the null hypothesis that there was no difference between the two user tools in terms of provider attitudes, ability of providers to competently counsel users, correct and consistent use, user perspectives and satisfaction, including cooperation of the husband/partner, as well as cost of the two tools. Therefore, data collected during the provider training, admission interview and follow-up interviews at home examined these parameters in considerable detail.

Research variables

The independent variable in this study is use of CycleBeads or the user card. The dependent variables are summarized in the table below.

Table 1: Research variables

Dependent Variables	Data Source
<p><u>Correct use</u></p> <ul style="list-style-type: none"> • Users who report no unprotected intercourse during fertile days • The ring is on the correct bead at the time of interview according to the calendar (or the beads on the user card are correctly marked) 	<ul style="list-style-type: none"> • User interviews
<p><u>Couple Communication /Male participation</u></p> <ul style="list-style-type: none"> • Husband is informed about SDM use • Couple communication about management of the fertile days • Partner participation in identifying the fertile days • Husband abstains/uses condom during fertile phase 	<ul style="list-style-type: none"> • User interviews • Male interviews
<p><u>Continuation rate</u></p> <ul style="list-style-type: none"> • Percent of users who continue using the method at the end of cycle 1, 4, and 7 • Reasons for continuation and discontinuation of the SDM 	<ul style="list-style-type: none"> • User interviews
<p><u>User satisfaction</u></p> <ul style="list-style-type: none"> • Satisfaction among men • Satisfaction among women 	<ul style="list-style-type: none"> • Male interviews • User interviews
<p><u>Number of new users</u> # of new SDM users</p>	<ul style="list-style-type: none"> • Clinic records/service statistics
<p><u>Cost per new user</u> Considering:</p> <ul style="list-style-type: none"> • # of users who need new beads/cards • Cost of purchase or production and delivery of commodity (CycleBeads and user card) • Duration and # of counseling sessions per user (CycleBeads/card) • Duration of training for providers (CycleBeads vs. user card) 	<ul style="list-style-type: none"> • Clinic records • Cost calculations • Training report
<p><u>Provider Competence and Satisfaction</u></p> <ul style="list-style-type: none"> • Knowledge of SDM • Attitude toward SDM • Counseling ability for the SDM 	<ul style="list-style-type: none"> • Interviews after initial training and the last month of the study • Observation of provider role plays using both tools
<p><u>Perceptions</u></p> <ul style="list-style-type: none"> • Qualitative assessment of both modalities 	<ul style="list-style-type: none"> • Focus groups with users

Data collection and analysis plan

Data were collected through: 1) service statistics; 2) provider interviews; 3) structured observation of role plays; 3) follow-up interviews with users; 4) inventory and clinic records; and 5) focus groups with men and women (separately) who had used SDM in the past year.

Service statistics: Service statistics on new and continuing users were collected monthly by type of method. This information was used to measure changes in the trends of acceptance of the SDM among new users in study centers. The collection of this information was done monthly throughout the life of the entire study and was the responsibility of the principal investigator or project coordinator. The number of new users unwilling to enter the study and the reason for declining was also tallied. Information on the number of users who were unwilling to be randomized due to a preference for CycleBeads or the user card provided a measure of acceptability of the two service delivery modes.

Provider data: Data were collected from providers through interviews and by observing them, with their knowledge, during role playing of counseling sessions with simulated clients.

Provider interviews: Interviews with providers aimed to assess the relative acceptability of the two modes of provision of the SDM to the provider. Individual interviews evaluated provider knowledge of how to provide the SDM using the user card and CycleBeads. This information was collected immediately after the initial training. The collection of this information was the responsibility of the principal investigator. In addition to the structured interview, information was collected using an attitudinal scale.

Observation of counseling role plays: This activity took place during the refresher training workshop in month three, which began with simulated counseling sessions to evaluate provider competence in offering the SDM using both tools. Simulated clients were trained to play the role of women with two different profiles suitable for SDM use. After the role-play, the simulated client recorded provider responses on a checklist. Providers rotated to several stations with simulated clients. (This methodology was selected due to the logistic difficulties of conducting a true simulated client exercise, which would have required observation of providers offering counseling to an equal number of simulated clients for both the user card and CycleBeads and measured provider attitudes).

Providers were informed that the primary purpose of the role-plays was to guide the refresher training, thus alleviating some of the stress they may have felt knowing they were under observation. Because providers were aware of the observation during role-play, this activity did not provide insight into how providers would actually behave with a client. Nevertheless, the role-play exercise provided information on whether providers used different approaches when counseling clients on the two tools, and whether they were equally competent in counseling on either tool. In the afternoon, refresher training focused on any addressing any weaknesses detected during the morning role-plays.

User data

Admission interviews: As is the policy of the MOH, providers offered the full range of family planning methods during the initial consultation. If the client selected SDM, she was invited to participate in the study. The provider informed the client that if she agreed, she would receive either CycleBeads or the user card, depending on which envelope was randomly drawn. If the woman gave her consent to participate in the study, she was counseled in the method randomly chosen. The length of the counseling session was recorded in order to compare the relative cost in terms of provider time for counseling with CycleBeads or the user card. Interviewers collected the contact and cycle length information from providers of women who consented to participate in the study and conducted the admission interview at their homes. Information on users' socio-demographic characteristics and contraceptive history was collected.

Follow-up interviews: Users received three follow-up visits at home and were interviewed by a trained interviewer after one, four and seven cycles of method use. If at the fourth or seventh cycle interview, the user was found to have discontinued use of the method for any reason, she was withdrawn from the study.

During the follow-up interview, the client was questioned about satisfaction with the method, correct use, management of the fertile days, and couple communication. Data were collected on reasons for discontinuation, including pregnancy. Male partners were interviewed to determine their level of participation in use of the SDM and to study couple communication. These interviews took place at the end of the seventh cycle or when the female partner discontinued use of the SDM.

If after four cycles of use the user spontaneously reported that she was dissatisfied with the tool she was assigned, she was allowed to switch and continue in the study. A separate instrument was designed for such cases.

Cost information

In order to compare the relative cost of offering the SDM with CycleBeads versus the user card, information was collected on the total cost per new user for each of the two tools. The elements considered were the cost of producing and delivering the tools, the duration of counseling (whether one tool required longer training than the other) and the cost of training providers.

The duration of counseling was tracked by the provider and noted on the consent form. The total number of CycleBeads or user cards distributed was monitored during the user interviews. Those responsible for training recorded the amount of time needed to train providers using each tool, and a provider training cost was calculated.

The cost of shipping (based on the unit cost of shipping 10,000 CycleBeads from Hong Kong to Guatemala) was added to the cost of producing the CycleBeads to determine the unit cost. User cards were printed in Guatemala at a central point and distributed to the centers for a small additional cost. Each user card was designed for six months of use. Continuing users of SDM would therefore need two cards per calendar year. In a regular service delivery setting, this would mean that the client would need to return to the providers to obtain a second card, she would need to be given cards when she was

counseled on the method, or the card would need to be re-designed to include 12 (or more) cycle. During the pretest, we learned that the user card was significantly more likely to be damaged or lost than CycleBeads. To take these recurrent costs into consideration, the sites maintained an inventory of the number of materials distributed and conducted a sensitivity analysis.

Focus groups with study participants (SDM users)

Focus groups were conducted in February 2007 with 18 female and 16 male participants. All participants had been SDM users during the past year. The purpose of the focus groups was to discuss the following: reasons for using the SDM, counseling preferences, decision-making, managing fertile days and comparing satisfaction among tools. There were four focus groups, two in Santa Rosa, (predominantly Ladino) community and two in Solola, (Mayan). Men and women attended separate focus groups.

4. RESULTS: Do SDM clients prefer paper user cards or CycleBeads?

In this section, the results of the study comparing the user card and CycleBeads as tools to increase effective use of the SDM are presented according to the study objectives, to examine acceptability, correct use, and continuation and cost effectiveness of the two SDM tools. Because CycleBeads are plastic and the user card became known as the “paper necklace,” the analysis compares these parameters according to whether the tool is paper (user card) or plastic (CycleBeads).

4.1 Implementation of the research protocol

The research was implemented as planned with the exception of a minor deviation in the type of provider who was authorized to recruit clients into the study. The protocol called for recruitment for the study to be done only by MOH clinic providers (auxiliary nurses), but this proved unfeasible, and 20% of providers in the study were non-auxiliary nurses. There is no expectation that this change in protocol would affect the outcome of the study.

The statistical test used in this segment of the study was finding of differences between two proportions. In this test, the null hypothesis assumes that the proportions of study participants reporting correct SDM use and continuation are equal in both study groups.

4.2 Knowledge and acceptability of SDM by providers

The first research objective was to compare the acceptability among providers who had been trained to provide SDM of the two user aids/tools the user card and CycleBeads.

Provider background

Of the 47 providers, 87% were female, 80% were auxiliary nurses, and 20% were nurses. More than half of the providers had six or more years of experience in family planning counseling, and more than 70% had received their last family planning training in the last 12 months

Provider knowledge of SDM

As indicated in Table 2, at the time of interview, nearly all (45 of 47) providers said they offered SDM as part of the method mix typically offered to family planning clients, while 78% of those who offered the method felt they were sufficiently prepared to offer the method. This figure did not differ significantly from feeling prepared to offer other methods. For example, only 75% of providers said they felt prepared to offer the condom.

Table 2: Percent of providers who offer each family planning method and who feel prepared to offer each family planning method

Method	N	% of Providers that Offer Method	N	Of those who Offer Method, % Providers Feeling Prepared
Condom	47	93.6	44	75.0
Pill	47	95.7	45	80.0
Injection	47	95.7	45	85.7
SDM	47	95.7	45	77.8
LAM	47	70.2	33	72.7
IUD	47	63.8	30	56.7
Sterilization	47	46.8	22	45.5
Emergency Contraception	47	27.7	13	38.5

Acceptability of SDM to providers

Providers who had been trained to offer SDM had positive attitudes towards the method and the two tools. As illustrated in Table 3, all 47 providers agreed that SDM was an effective method if correctly used.

Table 3: Provider attitudes towards SDM and tools*

Provider attitudes towards SDM: Provider	% Providers (N=47)
Believes that....	
SDM is effective if used correctly	100.0
SDM is effective as a family planning option	95.7
the health center is prepared to offer SDM	91.1
Male partners would be able to use SDM correctly	84.8
Couples in my community are interested in using SDM	82.6
SDM is consistent with religious beliefs in the community	79.1
SDM should be part of their professional training (part of in-service training)	76.7

*excluding missing values

The majority of providers interviewed (68%) felt that the user card should be modified to include colors (Table 4). The providers were perhaps unaware of the extent to which adding color would increase the cost of the card, and thereby affect the outcome of the cost analysis examining whether the paper card was less expensive than the plastic necklace. A smaller percentage of providers suggested that the card should be laminated or otherwise made sturdier, and made smaller. Lamination would significantly increase cost and make the card difficult to mark. The possible effect of the size of the card is unknown, but it is likely that having a larger card would also increase the cost.

Table 4: Provider suggestions for modifying the user card

	% Providers (N=47)
The “paper necklace” should be modified	68.1
How the “paper necklace” should be modified	% Providers (N=32)
Add colors	67.9
Better quality/ lamination	21.4
Smaller size	10.7

Provider attitudes on appropriateness of method tools for clients

The overwhelming majority of providers interviewed believed that the SDM tools were appropriate for their clients, easy to explain, and had the added advantage of engaging the husband or male partner in using a method of family planning. As indicated in Table 5, the user card was seen by providers as less attractive and more difficult for their clients to use than the plastic necklace. For each provider and for each tool, each item response was scored one (yes) or zero (no). The sum of the five item scores was significantly greater for the plastic version (mean=4.28) than the paper version (mean=2.91), and the difference was significant ($t=7.42$, $p<.001$, two-tailed). The difference amounted to 1.26 standard deviations.

Table 5: Comparison of provider attitudes towards user tools*

Provider Attitudes towards SDM tools	CycleBeads (N=47)	Paper (User Card) (N=47)
Easy to explain to clients	97.8	86.4
Attractive	97.7	41.9
Appropriate for clients	95.3	60.5
Tool engages husband in method use	93.2	72.7
Easy to use	73.8	53.5
Mean score (sd)	4.28 (1.14)	2.91 (1.49)

* excluding missing values

Provider competence in counseling clients about SDM and SDM tools

In interviews conducted three months after training, three quarters of providers scored highly, during interviews, on their technical competence to provide general information and criteria on the SDM to clients (scoring at least 10 out of a maximum 12 correct answers). Provider scores indicated somewhat less competency in telling clients when to initiate the method (Table 6). This is because many providers did not realize that if a woman is eligible to use SDM, but does not remember the date of the first day of their last period, she could still receive CycleBeads or the user card. If the client does not remember the date of her last period but, according to her response to screening questions has cycles between 26 and 32 days long, she should be counseled on method use, given the user tool, and advised to abstain or use condoms until her next period begins. She initiates SDM use when her next period starts. Apparently, this was not sufficiently clear to providers.

Table 6: Provider SDM technical competence as measured by test scores

Correct Composite Score	Percent Providers Competent (N=47)
General Information and Criteria	
4 to 6 (low)	10.6
7 to 8 (medium)	14.9
10 to 12 (high)	74.5
When to Initiate Method	
0-1 (low)	8.5
2 (medium)	76.6
3 (high)	14.9
Follow up visit	
1 to 3 (low)	12.8
4 to 5 (medium)	14.9
6 (high)	72.3

For each provider and for each tool, each item response was scored 1 (yes) or 0 (no). Although differences were small, and most providers scored well in offering both tools, provider scores, the sum of the seventeen item scores, indicated they were somewhat more competent in providing correct information on CycleBeads (mean=15.85) than on the user card (mean=15.77) (Table 7). However, the difference was not significant ($t=0.461$, $p>0.5$, two-tailed), and the difference amounted to 1.27 standard deviations.

Table 7: Provider competence for user instructions specific to paper or plastic SDM tool

Correct Composite Score	% Providers Competent with Cyclebeads (N=47)	% Providers Competent with User Card (N=47)
13 or fewer correct	8.5	6.4
14 to 15 correct	14.9	12.8
16 to 17 correct	76.6	80.9
Mean score (sd)	15.85 (2.73)	15.77 (2.60)

Provider counseling for clients with low or high levels of education

To assess the potential for provider bias in how a well-educated client might be instructed by the provider versus a client with limited education, simulated clients in the role-playing exercise described earlier represented themselves as having either a high or a low level of education. Provider mean scores from the simulated client role play (based on a composite score for various aspects of counseling) were compared as to how thoroughly they counseled these clients using the user card or CycleBeads.

Overall, their mean scores indicate that providers gave all groups a thorough explanation of how the SDM worked. Providers were less thorough in terms of discussing method options, follow-up or in using provider tools to aid in counseling their clients. Providers tended to give clients with a low level of education more information about contraindications and instructions for use (with either tool), and relied more on the provider tools with them. This may suggest that providers took more care to assure that lower literacy clients understood how the method worked and how to use the card.

Providers tended to give clients using CycleBeads more information about the mechanism of action and advantages/disadvantages. However, since providers knew they were being observed, their behavior in a real environment cannot be anticipated from this result.

Table 8: Provider role-play mean scores by educational level of simulated client and SDM tool used

Educational Level of Simulated Client		Hi Ed Cyclebeads (N=36)	Lo Ed CycleBeads (N=39)	Hi Ed User Cars (N=36)	Lo Ed User Card (N=33)	
Aspect of Counseling (Composite Score)	# of questions	Mean Score (S.D.)	Mean Score (S.D.)	Mean Score (S.D.)	Mean Score (S.D.)	p
Total	46	33.08 (6.33)	32.33 (6.65)	34.28 (7.12)	34.73 (4.78)	n.s.
Needs Assessment	7	5.28 (2.20)	5.46 (2.08)	5.47 (2.20)	5.73 (2.02)	n.s.
Methods Options	8	4.03 (1.50)	4.69 (1.66)	4.86 (1.29)	4.48 (1.60)	n.s.
Contraindications	6	3.92 (1.59)	4.79 (1.30)	4.47 (1.36)	4.88 (0.55)	<.01
Mechanism of Action, Advantages/ Disadvantages	6	5.69 (0.58)	5.15 (0.63)	4.36 (0.64)	4.88 (0.42)	<.001
Instruction for Use	8	6.17 (1.08)	6.36 (1.04)	6.03 (1.18)	6.94 (0.86)	<.005
Follow-up	5	3.31 (0.98)	3.10 (0.94)	2.75 (1.32)	3.24 (1.00)	n.s.
Use of Provider Tools	5	2.44 (1.16)	3.03 (1.27)	2.22 (0.64)	2.64 (0.86)	<.01

4.3 SDM acceptance

SDM enrollment and exclusion criteria

Providers' tally records show that all 646 women who received SDM counseling consented to participate in the study in the three districts. Following a review of the screening criteria in the admissions questionnaire, 32 women who did not meet the criteria were excluded from the analysis. The most common reason for exclusion (14 women, or 43% of those excluded) was menstrual cycles outside of the acceptable range of 26 to 32 days. There is no statistical difference between the number of women enrolled by tool.

Demographic profile of SDM users and partners

Women between the ages of 18 and 49 were eligible to be enrolled in study. Their husbands' ages ranged from 17 to 63 years. There were no significant differences between the mean age of users of CycleBeads or the user card (28 years) or that of their husbands or male partners (31 years). Nor were there significant differences in the educational level for users of both types of tools and their spouses. The largest category of women and men had an elementary education, while about 10% of women and 6% of men had no schooling. Nearly 12% of women and 22% of men had a university or technical degree.

Few women enrolled in the study had yet to have a child, while nearly one-fifth had five or more children. The highest number of children among women in the study was 12. There was no difference in the mean number of children for users of both tools (3.13 for

the user card, 2.95 for CycleBeads).

Source of SDM information

Respondents were asked where they heard about the SDM. Some reported more than one source. There was no difference between groups in the source of information. The most frequent response in both groups was a home visit (68%), while the second most common was during a visit to the health service (27%). The most common source of information about the SDM was a doctor, nurse or auxiliary nurse. More than a third of respondents heard about the SDM from a community health worker, a third of whom were APROVIME interviewers. About one in 10 women in both groups heard about the method from a neighbor, friend, or family member.

Contraceptive experience

Respondents were asked about their previous use of contraception, including ever use and use within the two months prior to the study. More than a third of users in both groups indicated they had no previous contraceptive use (36%) (Table 9). For those who had used at least one method (more than one response permitted), the most frequently-mentioned method was the injection (DMPA). About 30% of both groups had some experience with injections in the past, but none within the last two months, as this was an exclusion criterion for entering the study. Within the last two months, the most common usage was of the condom (about 38%), and abstinence (23%).

Table 9: Contraceptive experience – ever use and use 2 months prior to study

Method	Family Planning Method Ever Used			Family Planning Method Used Last 2 Months		
	Cyclebeads (N=262)	Cyclebeads (N=290)	Cyclebeads (N=552)	User Card (N=263)	User Card (N=293)	Total N=556
Nothing	35.1%	36.9%	36.1%	41.1%	42.3%	41.7%
Abstinence/Withdrawal	27.8%	22.4%	24.9%	42.6%	38.6%	40.4%
LAM	14.7%	13.1%	13.8%	10.3%	10.6%	10.4%
Condom	31.7%	25.2%	28.2%	39.9%	36.2%	37.9%
Injection	28.2%	30.3%	29.3%	0%	0%	0%
Pill	28.2%	26.2%	27.1%	2.3%	2.0%	2.2%
IUD	9.3%	10.7%	10.0%	2.3%	1.4%	1.8%
Other (Tablets)	5.1%	4.8%	4.9%	1.5%	1.0%	1.3%

Women randomly assigned to use either tool were asked why they choose the SDM. Respondents were able to choose all answers that applied, and the reason most often given for users of both tools was that SDM was a healthy alternative, had no side effects, involved nothing to take or use and/or did not interfere with breastfeeding (Table 10). The percentage of women using CycleBeads who gave this response was statistically significantly higher than those in the user card group, although both exceeded 90%. Among other answers, the most common reason was that SDM was easy to use.

Table 10: Reasons for choosing SDM

Reason Given	User Card (N=284)	CycleBeads (N=327)	Total (N=611)	p
SDM Cheaper	32.7%	31.8%	32.2%	n.s.
Husband against other methods	33.8%	30.9%	32.2%	n.s.
Healthy/ No side effects/ Nothing to take or use/Good in breastfeeding	90.8%	95.1%	93.1%	<.05
Moral/ Religious reasons	25.7%	27.5%	26.7%	n.s.
Easy to use	43.3%	39.1%	41.1%	n.s.
Is effective	22.5%	20.5%	21.4%	n.s.
Other	3.9%	2.1%	2.9%	n.s.

The following analyses compare correct use, and continuation of the SDM among users for the two user tools. Clients enrolled in the study were seen at one, four, and seven months. Results are presented comparing clients using the paper or plastic tool at the fourth cycle follow-up visit. The fourth cycle follow-up visit was chosen to maximize the amount of time of SDM use while minimizing the rate of lost to follow up.

4.4 Verifying SDM user knowledge

At the fourth cycle visit, clients demonstrated that they understood how to use either the user card or CycleBeads. Around three-quarters of all women in both groups gave spontaneous answers to the question, “How exactly do you use the necklace or user card?” With prompting, all but about 2% of women were able to answer the questions correctly. Clients also demonstrated that they knew how to determine if their cycles were too long or too short. Virtually all clients recognized that if their period came before they reached the dark bead or the big circle on their user card, their cycle was too short to use SDM. Similarly, all women in both groups were able to tell if their cycles were too long to use SDM if they move the black ring to the last bead or complete the paper necklace and have not had a period. Table 11 shows spontaneous answers only.

Table 11: Explanation of how to use CycleBeads during fourth cycle visit

Spontaneous responses to question	User Card (N=261)	CycleBeads (N=302)
Moves the black ring to the red bead when the period comes/ Marks the drop when period comes	78.2%	79.4%
Marks the first period day in the calendar	74.5%	76.4%
Moves the black ring one bead per day/ Marks the next symbol in the arrow direction every day	72.3%	74.3%
Has protected intercourse during fertile days (white bead/ squares)	72.6%	70.9%
Has unprotected intercourse during the brown beads/ during the circled days	70.8%	68.1%
My cycle is too short to use SDM if my period comes before getting to the big circle/dark bead	99.6%	100%
My cycle is too long to use SDM if I finish the (paper) necklace and the period hasn't come yet	100%	100%

4.5 Correct use and continuation

Women also demonstrated very high levels of compliance with the instructions for using SDM correctly. Virtually all clients were correctly using their tool by either moving the

ring on CycleBeads or marking the symbol on the user card every day. There were no differences between the two groups. In each group, two women had unprotected intercourse during the fertile period in the interim between cycle one and four.

Table 12: Client moves ring/marks symbols correctly every day

	User Card (N=263)	CycleBeads (N=306)
Ring is on the right bead/ circle is marked correctly	100%	100.0%
Moves black ring every day/ Marks symbol every day	99.6%	100.0%
Did not have unprotected sex when the ring was on white beads/symbol was a square	99.2%	99.3%

Managing the fertile days

Respondents were asked how they knew when to avoid intercourse and how they managed their fertile days in order to avoid a pregnancy. Table 13 indicates that respondents made few errors in identifying their fertile period.

Table 13: When to avoid intercourse or use condom by tool type used

If you do not want to get pregnant, when do you have to avoid intercourse or use condom?	User Card (N=265)	CycleBeads (N=306)	p=
White beads/ squares	73.2%	72.9%	n.s.
Between days 8-19	1.9%	1.0 %	
Both	24.9%	26.1%	

Women in both groups were about equally likely to say they either abstained from intercourse during the fertile period or used condoms. There was no difference between groups (Table 14).

Table 14: Management of fertile days by tool used

	User Card (N=259)	CycleBeads (N=303)
Abstain from intercourse	43.6%	50.2%
Condom	55.8%	49.8%
Other (incl withdrawal)	0.4%	0.7%

Continuation with each SDM tool

Virtually all users were still using the method at the fourth cycle visit. However, by the seventh cycle visit, a significantly greater percent of paper users had discontinued (Table 15). At the fourth cycle visit, nearly all users planned to continue using SDM for the coming three months. A few women in each group wanted another method. Two of these women in each group had two or more cycles out of range and were not suitable candidates to continue with the SDM. Those who specified another method preferred an injection.

Table 15: Type of tool used by visit number

		Visit number		
	N	1	4	7
Paper	286	97.6%	94.1%	77.3%
Plastic	328	96.6%	95.4%	88.7%
	P	n.s.	n.s.	<.05
Total	614	97.1%	94.8%	83.4%

Condition of tool

Although few respondents stated that they no longer had the tool they were given, there was a statistically significant difference between groups. All respondents in the CycleBeads group still had their tool, but four women in the user card group no longer had their cards. Two of these respondents said that their cards had been damaged; one reported losing it and the fourth gave no response. Of those using CycleBeads, three reported that their necklace was broken, while nine card users reported a torn or damaged card.

4.6 Follow-up counseling

Interviewers were asked whether they provided advice or information to clients during their follow-up visit. In total, about a third of interviewers said they gave advice because clients either did not know how to use the method, or because the client asked for advice. There was no overall difference in the likelihood of interviewers giving advice to users of either tool. In terms of specific topics, however, Table 16 shows a statistically significant difference in the likelihood of Interviewers giving advice about how to identify the fertile period. Interviewers were more likely to be asked or to offer this advice to users of CycleBeads.

Table 16: Interviewer information to client on follow-up visit one

Interviewer Discussion with Client	User Card (N=279)	CycleBeads (N=317)	Total (N=596)	p
Interviewer gave advice about method during interview				
Yes, didn't know how to use it	13.7%	13.7%	13.7%	n.s.
Yes, she asked me	21.3%	22.0%	21.7%	
What advice given?				
How to mark the collar/paper	10.8%	8.2%	9.4%	n.s.
How to identify the fertile days	11.1%	16.7%	14.1%	<.05
How to identify cycles out of range	15.8%	15.8%	15.8%	n.s.
What to do if cycle is out of range	11.8%	12.0%	11.9%	n.s.
How to manage the fertile days	3.2%	2.8%	3.0%	n.s.

4.7 Couple communication and male participation

Couple communication

Communication between couples and male participation are important for correct SDM use. The SDM tool facilitates partner communication, and it was hypothesized that CycleBeads would facilitate communication more than the user card because it can be more easily displayed and viewed by the couple. Respondents were asked a series of questions about communication with their partner, sexual autonomy, and couple decision-making. The responses to these questions were ranked according to the level of power of the women. These rankings were averaged to achieve a score for each sub-section. The scores were compared between the two user tools at admissions and exit. User card users at exit had a statistically higher communication score than CycleBeads users. The scores for a woman's right to avoid relations and for decision-making were not different between tools. Couple communication and the women's right to avoid relations improved from admissions to exit, and decision-making decreased from admissions to exit (Table 17).

Table 17: Couple communication

	Admissions			Exit		
	User Card (N=282)	CycleBeads (N=327)	p	User Card (N=285)	CycleBeads (N=321)	p
Communication	2.79 (0.36)	2.79 (0.36)	n.s.	2.87 (0.26)	2.82 (0.31)	<.05
Right to avoid relations	2.77 (0.37)	2.72 (.46)	n.s.	2.84 (0.30)	2.84 (0.30)	n.s.
Decision-making	3.98 (0.45)	4.00 (.46)	n.s.	3.87 (.41)	3.92 (.45)	n.s.

Male participation

The SDM requires the cooperation and participation of the male partner. Table 18 shows that 99% of husbands of study participants, with no difference between groups, received information on the SDM. Of these, the great majority in both groups received information directly from the client. The remainder received information from a provider or from APROVIME interviewers. There was no difference between groups in the likelihood of husbands receiving information or by whom.

Table 18: Husband received information on SDM and from what source

	User Card N=264	CycleBeads N=305	Total N=569	p
Husband received information	99.2%	99.0%	99.1%	n.s.
If yes, From whom?	(N=262)	(N=302)	N=564	
Client	85.5%	83.8%	84.6%	n.s.
Provider	8.0%	12.6%	10.5%	n.s.
Aprovime	14.5%	13.6%	14.0%	n.s.

Respondents were asked who normally marks the first day of her period on the calendar. The great majority did it themselves (Table 19). A few couples in each group did this jointly with their husbands or partners. There was no difference between groups.

Table 19: Who marks the first day of your period in the calendar?

	User Card (N=265)	CycleBeads (N=304)	Total (N=569)	p
Client	97.7%	97.4 %	97.7%	n.s.
Husband	1.1%	1.0%	1.1%	
Both	1.1%	1.6%	1.4%	

Women in both groups were nearly unanimous in reporting that their husband participated in the use of the method (Table 20). Nearly 95% reported that their husbands abstain during the fertile period, about half reported condom use, and nearly a fourth indicated that the husband agrees when to have intercourse or not. While few husbands actually move the ring or mark the squares on the card, there was a significant difference between the groups in the percentage of husbands who remind the client to mark the calendar, being nearly twice as common among those in the CycleBeads group. It is conceivable that this very visible tool may invite more notice and interaction from the husband.

Table 20: Husband's participation in the use of the method

	User Card (N=263)	CycleBeads (N=306)	Total (N=567)	p
Husband participated in method use	99.6%	100.0%	99.8%	n.s.
How?				
Abstains	92.8%	94.8%	93.8%	n.s.
Uses condoms	54.0%	48.5%	51.1%	n.s.
Reminds client to mark calendar	19.4%	34.1%	27.3%	<.001
Agrees when to have intercourse or not	24.7%	23.3%	23.9%	n.s.
Buys condoms	20.5%	22.0%	21.3%	n.s.
Moves the ring/ marks squares	4.9%	3.3%	4.0%	n.s.

4.8 Opinions and satisfaction with SDM use

Respondents were asked how difficult or easy they found it to learn to use the SDM and the tool, according to which tool they were using. Users of both CycleBeads and the user card said that SDM was easy to learn (Table 21). A slightly smaller percentage of respondents, but still above 80%, found CycleBeads easy to use. As the study concluded, clients were again asked how satisfied they were with the SDM. The majority of respondents, with no difference between card and CycleBeads, felt that the SDM was easy to learn (97%) and that the SDM was easy to use (97%). The great majority in both groups felt that the method works well to avoid pregnancy (98%), the method was good for their health (97.0%), and that their husbands liked the method (96%). Positive attitudes increased in all of the measured aspects of user opinions on SDM from admission to exit.

Table 21: User opinions on SDM by tool

	Admission			Exit		
	User Card (N=283)	CycleBeads (N=326)	p	User Card (N=284)	CycleBeads (N=321)	p
How Difficult is it to learn SDM?						
Easy	86.9%	87.7%		96.5%	97.2%	
More or Less Easy/Hard	13.1%	12.3%	n.s.	3.5%	2.8%	n.s.
How Difficult is it to use the CycleBeads Tool?						
Easy	82.7%	80.7%		98.2%	98.1%	
Medium	17.3%	19.0%		1.8%	1.9%	
Hard	0%	.3%	n.s.			n.s.
How do you consider the SDM works to avoid pregnancies?						
Good	89.0%	93.6%		98.6%	98.4%	
More or less	11.0%	6.4%	<.05	1.4%	1.6%	n.s.
How do you think the method is for your health						
Good	96.8%	97.2%		100.0%	100.0%	
More or less	3.2%	2.8%	n.s.			n.s.
How does your husband like the method?						
Likes it	81.6%	82.2%		95.4%	96.9%	
Either way (indifferent)	17.7%	17.8%		3.9%	2.5%	
Doesn't like it	0.7%	0.0%	n.s.	.7%	.6%	n.s.

Clients were also asked how they felt about the SDM. Although a greater percentage of CycleBeads than user card users reported that they felt very good about the method, the difference was not significant. Nearly 78% of the user card (paper) group and more than 82% of the plastic group reported that the method was good or very good.

Table 22: How do you feel about using the method?

	User Card (N=284)	Cyclebeads (N=319)	Total (N=603)	p
How do you feel about the collar method?				
Very good	22.2%	28.5%	25.5%	n.s.
Good	56.0%	53.9%	54.9%	
Normal	21.5%	17.2%	19.2%	
Bad	.4%	.3%	.3%	
Would you recommend this method to other couples?				
Yes	94.0%	86.8%	90.1%	<.005
No	6.0%	13.2%	9.9%	

The great majority of women in both groups said they would recommend the method to other couples. There was a statistically significant difference between groups, with women in the user card group more likely to say they would recommend the method to others than women in the CycleBeads group.

Reasons for exiting the study

Four women in the user card group and seven in the CycleBeads group experienced two or more cycles out of range, requiring them to find another method (Table 23). Three from the user card group and five from the CycleBeads group decided to use a method other than SDM. Some 20% of the user card group wanted to switch to CycleBeads at any point during the study. No CycleBeads users chose to switch to the

user card.

Table 23: Reasons for exiting study

	User Card (N=284)	CycleBeads (N=323)	Total (N=607)	p
Completed 6 cycles/Not pregnant	75.7%	93.5%	85.2%	<.001
Changed tool	20.1%	.0%	9.4%	
2 or more cycles out of range	1.4%	2.2%	1.8%	
Doesn't wish to continue	1.1%	1.5%	1.3%	
Doesn't wish more interviews	.4%	.9%	.7%	
Other	1.4%	1.9%	1.6%	

Plans to continue with the SDM

Up to this point in the analysis, the paper and plastic groups were largely equivalent in terms of acceptability and ability to use the SDM method with the participation of their husbands. At the exit interview, however, more than half of women in the paper group said they would continue with the method but switch to CycleBeads (Table 24). Four women in the CycleBeads group chose to change to the user card ($p<.001$). In total, about 95% of women in both groups said they planned to continue using SDM.

Table 24: Intention to continue using SDM

Will Continue to use the SDM	User Card (N=284)	CycleBeads (N=321)	Total (N=605)
Yes	44.0%	95.0%	71.1%
Yes, but the other tool	51.1%	1.2%	24.6%
No	4.9%	3.7%	4.3%

For those who opted to change the tool, women were asked why they wanted to change. The spontaneous answers included that the plastic necklace was durable, easier to remember or to use, prettier, or that they simply liked it better.

4.9 Problems managing the fertile days: pregnancies

There were 12 pregnancies among the 614 enrollees, 5 among the user card group and 7 among the CycleBeads group. These individuals completed a separate interview to establish to the extent possible the reason for the pregnancy. Because the sample size is so small, these results are presented in terms of numbers of individuals.

Of the 12 women who became pregnant, 10 said they were using the SDM when they became pregnant, while two stated that they wanted to become pregnant and were presumably not using the method correctly to avoid pregnancy.* Five among the

* The SDM, like other fertility awareness method, can be used to either avoid or achieve pregnancy.

CycleBeads group said they had unprotected sex during white bead (fertile) days. Only one woman in the user card group had sex during the square symbol (fertile) period. Five of the CycleBeads users and four of those with user cards said their husbands insisted on having unprotected sex during the fertile period.

Attitudes toward SDM following pregnancy

Women who became pregnant during the study retained positive views of the SDM. Four of five user card users and seven of eight CycleBeads users said they would recommend the method to others. Only one woman using the user card and one woman using CycleBeads said they found the SDM hard to learn.

Attitudes of husbands towards the SDM following pregnancy

The majority of women who became pregnant in the user card group (3 of 5) and half the women in the CycleBeads group (4 of 7) said their husbands still liked the method. The participatory nature of the SDM was reflected in the finding that all of the women in the user card group and five of seven in the CycleBeads group said that their relationship with their husbands had changed with the use of the method. The majority felt that the change had been for the better, largely because communication between the couple improved. One woman in each group said that her relationship had changed for the worse, and that her husband had become upset, (possibly with the requirements to abstain or use a condom during the fertile period).

4.10 Cost-effectiveness by tool

A fifth research objective of the study was to compare the relative cost and cost-effectiveness of providing SDM with CycleBeads and the user card. It is important to keep in mind that the user card developed for this study was a black-and-white, two-sided, standard-sized piece of paper with images sufficient for six cycles. If this card continues to be used, either clients would need to return to their provider every six months for additional cards or they would be given multiple cards at once. Either of these would imply costs for clients and programs, with a higher probability of lost cards or discontinuation. Alternatively, a large card with space for more cycles would be more costly. Thus, a number of factors could result in increased cost for user cards.

With information on the quantities of each tool (used in this study) distributed, we conducted a “sensitivity analysis,” examining factors that could affect the price of the instrument, such as discounts for large purchases (from 1000 up to 50,000 units as the basis for calculating costs for CycleBeads and the user card) and replacement costs. Other costs such as provider training and counseling time were the same for both tools and did not affect the cost per user. As the data in table 25 suggests, cost per user for CycleBeads is higher after one to three years regardless of the quantity of units purchased. The user card cost per user becomes more expensive than CycleBeads in year four and five because of replacement costs. Following the suggestion of providers to laminate the card or add color would eliminate the cost advantage of the card in years one to three.

Table 25: Cost comparison of CycleBeads and user card

Product	# Users	# of Product	Price	Total Price	Estimate for Replacement per user	Estimated Replacement Cost per user	Total Cost	Cost per user per year					
								1 year	2 years	3 years	4 years	5 years	
CBs	1,000	1,000	\$1.06	\$1,060	0.0280	\$28	\$1,088	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09
CBs	10,000	10,000	\$1.06	\$10,600	0.0280	\$280	\$10,880	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09
CBs	15,000	15,000	\$1.06	\$15,900	0.0280	\$420	\$16,320	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09
CBs	50,000	50,000	\$1.06	\$53,000	0.0280	\$1,400	\$54,400	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09
User Card	1,000	2,000	\$0.1400	\$280	0.0576	\$8.06	\$288.06	\$0.29	\$0.58	\$0.86	\$1.15	\$1.44	\$1.44
User Card	10,000	20,000	\$0.0700	\$1,400	0.0576	\$40.32	\$1,440.32	\$0.14	\$0.29	\$0.43	\$0.58	\$0.72	\$0.72
User Card	15,000	30,000	\$0.0350	\$1,050	0.0576	\$30.24	\$1,080.24	\$0.07	\$0.14	\$0.22	\$0.29	\$0.36	\$0.36
User Card	50,000	100,000	\$0.0175	\$1,750	0.0576	\$50.40	\$1,800.40	\$0.04	\$0.07	\$0.11	\$0.14	\$0.18	\$0.18

4.11 SDM user opinions

To provide additional in-depth information on the opinions of SDM users, focus groups were conducted in February 2007 with 18 female and 16 male participants. All participants had been SDM users during the past year. The purpose of the focus groups was to discuss the following: reasons for using the SDM, counseling preferences, decision-making, managing the fertile days and comparing satisfaction among tools. There were four focus groups, two in Santa Rosa, (predominantly Ladino) and two in Solola (Mayan). The men and women attended separate focus groups.

Table 26: Demographics of focus group study participants

	<i>Women: Santa Rosa</i>	<i>Men: Santa Rosa</i>	<i>Women: Solola</i>	<i>Men: Solola</i>
No. of Participants	8	8	10	8
Average Age	28.1	28.1	26.5	33.6
Marital status	100% married	100% married	60% married, 40% in union	87.5% married, 12.5% in union
Level of education	7 High School, 1 Primary	5 High School, 2 Primary, 1 University	6 Primary, 3 No schooling, 1 High School	4 Primary, 2 High School, 2 No schooling
Religion	62.5% Catholic, 37.5% Evangelical	100% Catholic	80% Catholic, 20% Evangelical*	62.5% Catholic, 37.5% Evangelical
Average no. of children	2.5	2.1	3.5	3.6
Tool used	50% User card, 50% CycleBeads	75% User card, 25% CycleBeads	80% CycleBeads, 20% User card	80% CycleBeads, 20% User card
Previously used methods	4 Withdrawal, 1 IUD, 2 No method, 1 Rhythm	2 No method, 2 Withdrawal, 2 Condoms, 1 Rhythm, 1 pill	8 No method, 1 Condoms, 1 Injectable, and pills	7 No method, 1 pills

Reasons for family planning

To begin, participants were asked why they decided to initiate family planning use. In the study, more than a third of those who adopted the SDM were using contraception for the first time. Both men and women agreed that they started to use family planning for economic reasons, specifically, being able to care for their family's health and

provide for their children's education. The women also mentioned that it was important to have fewer children in order to be able to contribute financially to the household. Surprisingly, only men emphasized the benefits of family planning for women's health. The men commented that too many pregnancies could put women at risk for illness or even death. Some men also commented that they decided to start using family planning when they learned about natural methods that are free from side effects.

Deciding to use the SDM

Study participants were then asked why they chose the SDM and what they liked about the method. Most participants said they chose the SDM because it was a natural method. However, each group focused on different aspects of the method. The women emphasized greater communication with their spouses. According to female participants, the SDM has allowed them to openly discuss their sexual relations and other aspects of sexuality. The women felt the SDM generated a greater level of comfort between the couple by forcing them to communicate about when they can have intercourse and how they will protect themselves on fertile days. Specifically, better communication between couples allowed female participants to negotiate condom use and abstinence on fertile days.

Testimonies...

"One gets married but still isn't completely comfortable with their husband, and it's nice to have that level of comfort not only for the woman's health but for the children as well. That way there's more care and understanding."

"[Family planning] is decided by the couple so that there's better communication."

"We both decide what we are going to do that day, so he knows where the ring is that day and that we can't have intercourse. We discuss everything beforehand."

SDM satisfaction

Most female participants mentioned that the SDM had no side effects, that it was easy to use and that it did not go against their religious beliefs. A few female participants also mentioned that the method was cheap and available at their health center. Another advantage mentioned was that by moving the ring or marking the user card on a daily basis, participants were constantly reminded of the method.

On the other hand, the men above all else emphasized the fact that it was better for a woman's health because there were no side effects. Male participants also commented on their dissatisfaction with the side effects of other methods, including mood swings and weight gain. The men also liked being able to know a woman's fertile days by monitoring her cycle.

Testimonies...

"In my case, I like the SDM user card because it allows you to monitor the woman's menstrual cycle and that's enough to avoid pregnancy."

"We don't like other methods because they bring illness, but the [SDM] user card doesn't harm the woman's body."

"Other family planning methods may have hidden side effects that women aren't aware of."

Study participants were also asked about what they did not like about the method. At first, some women in Santa Rosa stated that they thought the eligibility criteria, specifically cycles within 26-32 days, were too strict and that it was discouraging for women interested in using the method. However, these participants also admitted that they did not calculate their cycle length prior to using the SDM and did not know if they would be eligible. Although some participants thought their cycles were out of range at first, they realized that they were within 26-32 days after they began using the method.

Another disadvantage of the method, according to the women of Solola, was that they could not have intercourse on the fertile days. This is the case for women who practice abstinence on the white-bead days. Some of the men also mentioned this. Other men commented that they did not like the fact that they had to wait one month to know if their wife could continue using the method. That is, they knew that if a woman's cycle was less than 26 or more than 32 days she might have to switch methods.

Outlets for learning about the SDM

Participants were then asked to discuss how they became aware of the SDM. Both the men and the women had learned about the SDM from several sources. However, most women learned of the method through a nurse or other personnel at their local health center. In addition to health centers, participants mentioned home visits by health personnel, outreach activities and community talks.

"I invited the health worker into my home; she explained that our conversation would be private."

Some participants also heard about the method from family and friends. Others mentioned that they heard about the SDM during a training, but details on these trainings were not solicited. The women also mentioned learning about the methods from NGOs such as APROVIME and AMIGAS.

Previous use of other methods

All participants were also familiar with other methods and about half said they had used one or two other methods previously. Some participants had only used other natural methods, such as periodic abstinence and withdrawal, while others had tried hormonal and barrier methods. Men and women in Santa Rosa mentioned the Rhythm method, withdrawal, birth control pills, condoms and the IUD as methods they had previously used. Furthermore, some of the women in Santa Rosa commented on the importance of using methods that are approved by the Church. In Solola, all but three participants had never used a contraceptive method, while of the total 34 participants in all focus groups, only 7 had previously used a method other than rhythm method or withdrawal.

Testimonies...

"The IUD hurts the woman, it makes her bleed a lot and it could be a serious problem."

"My wife would be in a bad mood, because [the pill] damages her nervous system."

Although participants were not asked to discuss their experiences with other methods, a discussion quickly arose regarding side effects. The men, especially, were against the use of non-natural methods due to side effects. The men went on to share their experiences with the IUD and birth control pills.

Preferences on where to receive SDM services

Participants' responses differed when asked where they preferred to receive SDM services. The Mayan women of Solola preferred going to health centers because they believe the personnel there are better at explaining the method and the method is more likely to be available there. In Santa Rosa, Ladina women preferred receiving services at home, for greater privacy and for fear that if they attended a health center they might be treated by a male provider. The women of Santa Rosa also felt that the community providers were more compassionate and patient.

Either the men's groups did not have a preference or they agreed with the women of Santa Rosa. The men believe that personnel at the health centers are better trained but that the centers themselves offer poor quality services, specifically long waiting times, lack of space and impatient staff.

As a result, most men preferred going to community health workers or having them visit. Some men also mentioned that a health center is not always nearby, but that community workers are usually accessible.

Another advantage of community health programs expressed by participants is that the workers live in the community and build trust with the people.

Provider preferences

Participants were asked to talk more about their provider preferences. All groups agreed that they preferred a female provider for SDM counseling. The women preferred a female because they felt more comfortable with women and they did not want their husbands to be jealous. The Mayan women of Solola said that receiving services from a male provider could cause problems between the couple or start rumors among neighbors. The Ladina women of Santa Rosa went a step further and identified their ideal provider as a female nurse who would visit them at home, allowing their partner to participate in the counseling.

The men also commented that their wives would feel more comfortable with a woman and more confident about asking questions. Other preferred provider characteristics mentioned included patience, empathy, confidence and being able to speak K'achiquel.

Decision-making

Most focus group participants agreed that decisions about the home are shared by the couple. However, a few participants said the decisions were made only by the men and others added that their mother-in-law sometimes makes decisions for the household.

The women agreed that decisions about sexual relations were also shared by both partners and that shared decision-making in family planning had improved since using the SDM. However, some women in Solola expressed the belief that the men should be the sole decision-makers because they are the sole providers.

Testimonies...

"You pay more attention when you're in your house, because the nurse is listening and she isn't distracted by others. When you're at home you can ask questions, it's more personal."

"In the community there's time to understand [the counseling] little by little. There are people who do not understand when they go to the center. In the community there are people that speak Spanish and K'achiquel and can translate and better communicate with the patient."

"In the health centers it's a matter of luck. You have to put up with people treating you badly because you can't afford to go to a doctor."

Testimonies...

"...the man covers household expenses, he gives and he says what goes."

"With a natural method, the man has to have respect. It doesn't work if he is demanding."

Many of the men responded that traditionally they are the decision-makers in regards to sexual relations; however, they admitted that they need to work with their wives to use SDM.

Managing fertile days

Participants seemed optimistic about their ability to manage their fertile days well. When asked how they protect themselves on fertile days, participants mentioned abstinence and condom use. The women commented that they tried to involve their partner so that he would know ahead of time when she was fertile. Interestingly, a number of men said that it was important to them to know ahead of time when their wives would be fertile. The women mentioned that once the SDM was explained to their husbands, the men were cooperative in managing the fertile days. Both men and women stated that communication was the key to following the method correctly.

CycleBeads vs. user cards

Lastly, the participants were asked to compare CycleBeads and user cards. Participants said they were aware that the user card and CycleBeads have the same function and effectiveness. Regardless, each group agreed that they preferred CycleBeads. Participants said their preference lies in the tool's durability and the fact that it is easier to use and understand. Some men commented that CycleBeads are also preferable for those who cannot read and write and are not comfortable with the user card. The following comments were made by participants regarding CycleBeads:

Even those who had continued using the user cards for several months said that they would rather switch to CycleBeads. It was pointed out that the user cards were less durable, less practical and more likely to get lost.

All participants seem satisfied with the method, regardless of the tool used. However, the attractiveness of the CycleBeads as a visual aid, along with its durability and user-friendliness made it the favorite among focus group participants.

Testimonies...

"I can hang it wherever, even in the bathroom."

"As indigenous people, we learn [how to use CycleBeads] our way."

"It's practical."

"The necklace is better because the user card gets lost."

"The necklace can fall in water and it doesn't get damaged."

"On the wall, [the user card] gets wet or it dampens."

"[CycleBeads] don't wear, but with the user card you have to keep changing the sheet."

5. CONCLUSION/DISCUSSION

5.1 Knowledge and acceptability of SDM user tools by providers

The acceptability of the SDM was studied in several ways – through provider interviews, client counseling role plays, follow-up with SDM users, and focus groups. The results of these comparisons of CycleBeads and the SDM user card indicate that both tools are accepted by providers, clients and their partners but most preferred CycleBeads. Providers were unanimous in their belief that the SDM was effective if used correctly, and that both tools could facilitate this. More than 80% thought that couples in their communities would be interested in using the SDM. About two-thirds agreed that the user card should be modified, primarily by adding color and to make it sturdier.

Providers overall were equally well prepared in terms of technical competence in

providing either tool. In counseling role plays with clients who had either a high or a low level of education, they did equally well in counseling clients about both tools but tended to score more highly for instructing the less well educated client in how to use the method.

In all of the parameters of acceptability, husband involvement and provider attitudes, there was very little difference between the two groups. However, at the end of the study, more than half of women from the user card group who planned to continue the method said they would like to switch to CycleBeads. This preference for CycleBeads was also notable among focus group participants. Clients in the user card group had learned about CycleBeads and felt they were more durable, more attractive, and that the colors may help them remember to keep track of their cycles. No clients chose to switch from CycleBeads to the user card. These findings suggest that the plastic necklace has an appeal to users that should be considered when programs are deciding upon whether to offer one tool or the other or both.

5.2 SDM acceptance, correct use, continuation, and satisfaction among users

The CycleBeads and user card tools proved to be equally effective in terms of helping couples use the SDM method successfully. Until the study ended, users of both tools responded very similarly to questions of acceptability. They were equally likely to use the method correctly, and the pregnancy rate for this study corroborates that the great majority of women and their partners were using the method successfully, and that both partners were satisfied with the method.

Aside from the fact that more than half of the user card group planned to switch tools and use CycleBeads to keep track of their fertile period, the majority of users in both groups planned to continue using the method. It is worth noting that more than 36% of women surveyed in the Guatemala National Maternal and Child Health survey of 2002⁶, who had used a contraceptive method said they had discontinued use within 12 months. Discontinuation was especially high for the condom (60.6%) and the pill (51.5%). The most common reason for discontinuing hormonal methods was side effects, while the most common reason for discontinuing the rhythm method, accounting for nearly half of all discontinuation, was method failure.

In contrast, more than 95% of users of both SDM tools said at the completion of the study that they planned to continue using the SDM in the next three months. This suggests that women who prefer to rely on natural methods and want to use them correctly and effectively, have a strong motivation to continue using the SDM, regardless of which tool they may use to help them. The category of women expressing this preference is higher in Guatemala than in many countries: nearly 8% of women say they plan to rely on abstinence or rhythm in the next 12 months. Furthermore, 16% of women surveyed said they did not plan to use any method in the future for religious reasons (ENSMI 2002). These findings indicate a niche for the SDM that few other methods can fill.

⁶ Op. cit. Guatemala Encuesta Nacional de Salud Materno Infantil 2002, October, 2003.

5.3 Relative cost-effectiveness of the user card and CycleBeads

Even though user cards often need to be replaced, a cost savings with CycleBeads over user card did not materialize – at least during the study period, using the six-cycle card. The price differential between the two tools was relatively large with user card being less expensive than CycleBeads during the first two years of use. However, the greater durability of CycleBeads reduces the savings of paper over plastic over time, and additional costs for the user card in routine service delivery (e.g., increased need for replacement cards, return visits to obtain more cards, a large card, etc.). In settings where cost recovery through sales is feasible, it is likely that clients would be willing to pay more for CycleBeads. In willingness-to-pay for SDM research conducted as part of SDM social marketing studies in Ecuador and Benin⁷, clients expressed willingness to pay about \$5 for a set of CycleBeads. Although the user card was not included in these studies, it appears likely that this is a higher price than clients would be willing to pay for a user card. National programs and other organizations engaged in procuring and dispensing the SDM may wish to consider the cost recovery and durability aspects of CycleBeads, in addition to the significant user preference for CycleBeads found in this study.

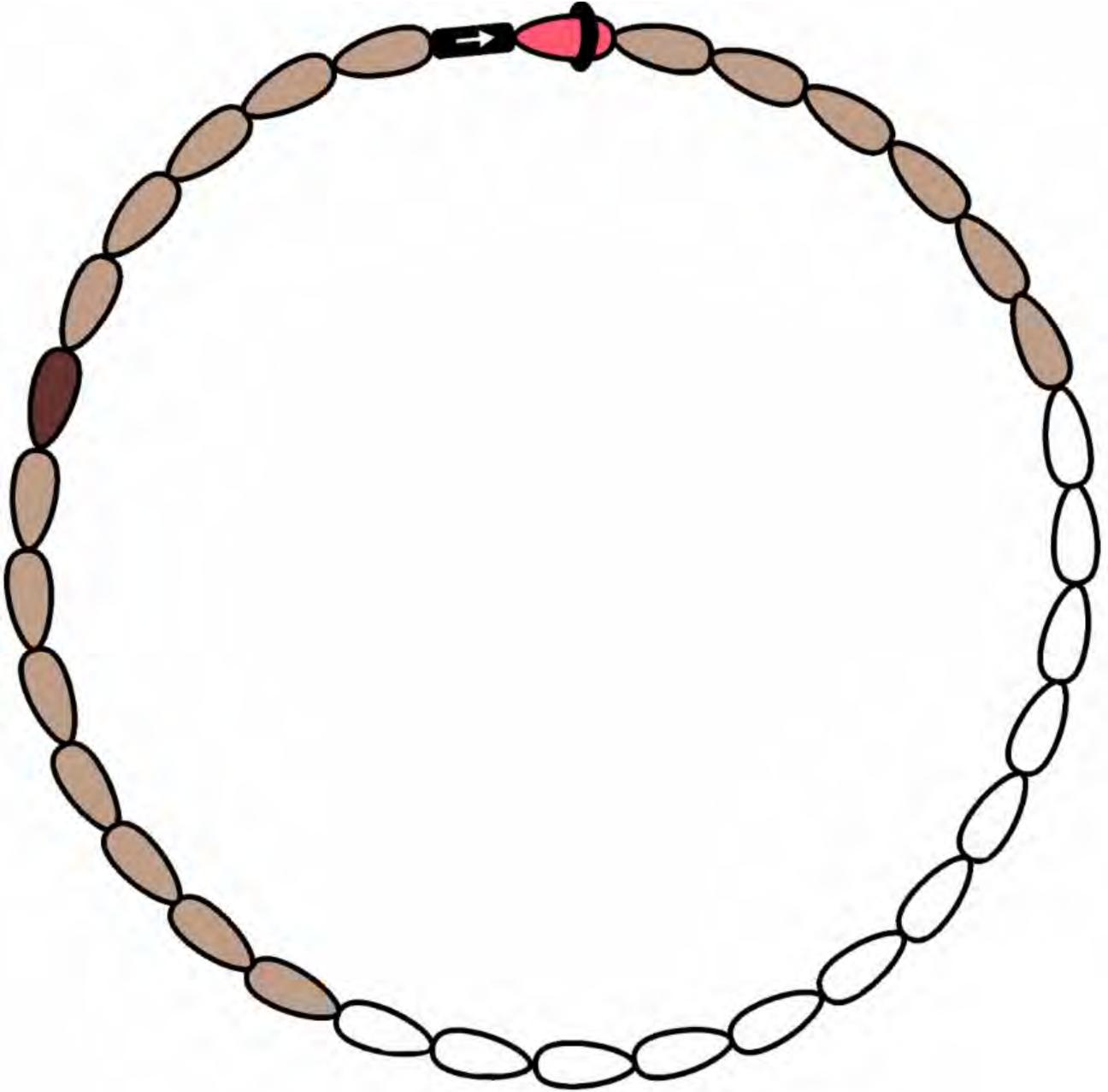
6. DISSEMINATION OF STUDY RESULTS

In Guatemala, the MOH and IRH will use the results of this study to determine the feasibility of offering the user card along with CycleBeads as part of the national family planning program. Based on an evaluation of the experiences and the data resulting from the study, with an emphasis on the comparison of the cost per new user for each mode, a recommended course of action will follow. At present, the comparability of the two user tools suggests that costs and user preference are the only significant difference between the two methods.

Results are being disseminated through workshops, presentations in conferences and publications to personnel in the MOH, IGSS, other agencies in Guatemala, and the international reproductive health community, donors and technical assistance agencies. The aim of these dissemination activities is to expand access to the SDM through the services provided by the MOH, IGSS, and NGOs, while improving quality of care and informed choice. Key stakeholders from the public and private sector are currently meeting to develop a strategic plan for scaling-up the SDM in selected areas of the country.

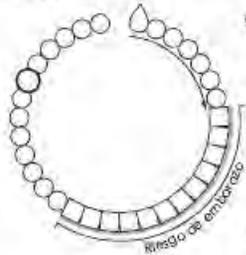
⁷ Final report of the Social Marketing Study, Institute for Reproductive Health, 2007.

APPENDIX A: CYCLEBEADS ILLUSTRATION



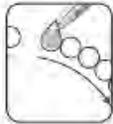
APPENDIX B: USER CARD

El Método de Días Fips se basa en el ciclo de la mujer. El ciclo empieza el primer día de la menstruación y termina un día antes de la siguiente regla. El Collar representa el ciclo de la mujer y cada cuenta es un día del ciclo.

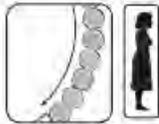


Cada cuenta representa un día.

- La gota representa el primer día de su regla.
- Los círculos representan los días de muy bajo riesgo de quedar embarazada.
- Las cuadradas representan los días de mayor riesgo de embarazo.
- El círculo más grande es el día en que puede comenzar la menstruación.



El día que empiece su regla, marque la gota. También marque este día en su calendario. Cada día marque la cuenta que sigue en dirección de la flecha.

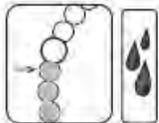


Los días que marque un círculo son días de muy bajo riesgo de embarazo. En esos días **SÍ puede tener relaciones sexuales**.



Los días que marque un cuadrado son los días que usted puede quedar embarazada. En esos días, use **Condón o NO tenga relaciones sexuales**.

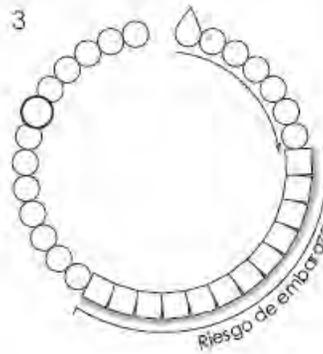
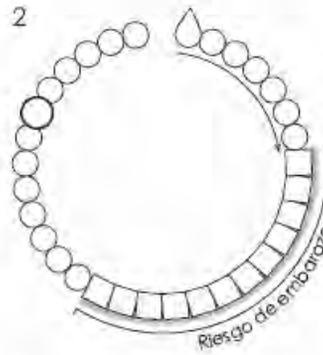
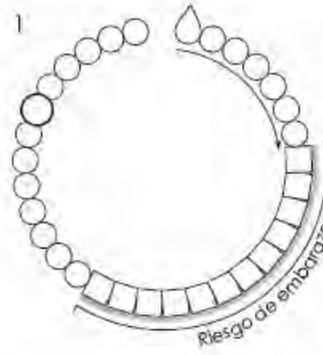
Consulte con el trabajador de salud si:



Su regla empieza ANTES de llegar al círculo más grande.



Llega a la última cuenta del Collar y todavía no ha visto su menstruación.



Calendario 2004

Siempre marque en su calendario el primer día de su regla.



Enero

D	L	M	M	J	V	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Febrero

D	L	M	M	J	V	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Marzo

D	L	M	M	J	V	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Abril

D	L	M	M	J	V	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Mayo

D	L	M	M	J	V	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Junio

D	L	M	M	J	V	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Julio

D	L	M	M	J	V	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Agosto

D	L	M	M	J	V	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Septiembre

D	L	M	M	J	V	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Octubre

D	L	M	M	J	V	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Noviembre

D	L	M	M	J	V	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Diciembre

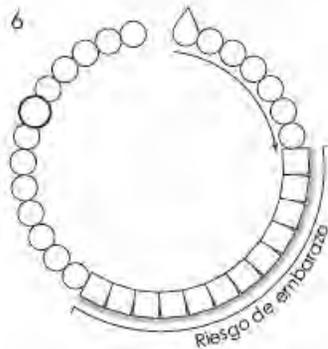
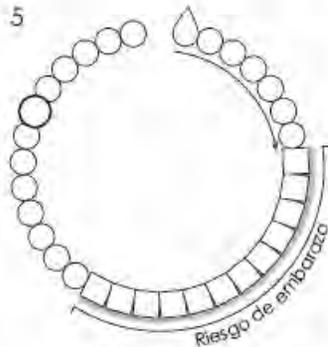
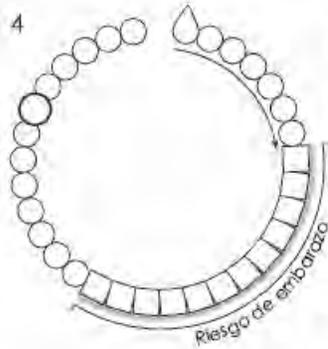
D	L	M	M	J	V	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Si un día se le olvida marcar su Collar, siga estas instrucciones:

1. Vea en su calendario el primer día de su menstruación.
2. Empezando con el día de su regla, cuente el número de días que han pasado, incluyendo hoy.
3. Regrese al collar, empezando con la gota, marque el mismo número de símbolos.

Antes de llenar todos los collares o si cambia el año, acuda a su proveedor para que le dé un collar nuevo.

APPENDIX B: USER CARD



Calendario 2004

Siempre marque en su calendario el primer día de su regla.



Enero

D	L	M	M	J	V	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Febrero

D	L	M	M	J	V	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Marzo

D	L	M	M	J	V	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Abril

D	L	M	M	J	V	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Mayo

D	L	M	M	J	V	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Junio

D	L	M	M	J	V	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Julio

D	L	M	M	J	V	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Agosto

D	L	M	M	J	V	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Septiembre

D	L	M	M	J	V	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Octubre

D	L	M	M	J	V	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Noviembre

D	L	M	M	J	V	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Diciembre

D	L	M	M	J	V	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Si un día se le olvida marcar su Collar, siga estas instrucciones:

1. Vea en su calendario el primer día de su menstruación.
2. Empezando con el día de su regla, cuente el número de días que han pasado, incluyendo hoy.
3. Regrese al collar, empezando con la gota, marque el mismo número de símbolos.

Antes de llenar todos los collares o si cambia el año, acuda a su proveedor para que le dé un carnet nuevo.

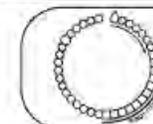


CARNET DE USUARIA

Nombre: _____

Fecha de primera visita: _____

Fecha de visita de seguimiento: _____



Sirve de guía a las parejas para saber qué días puede o no quedar embarazada la mujer. Es un método natural.

APPENDIX C: ADMISSION FORM

ADMISSION FORM

TO BE COMPLETED DURING THE FIRST 8 DAYS (SHOULD NOT EXCEED 15 DAYS) AFTER THE USER HAS BEGUN USING THE STANDARD DAYS METHOD

ADMISSION FORM	
Write down the user's identification number. Also write down her information in the Code of Users book .	_____ - _____ - _____ Dept. Organization Teacher _____ - _____ Interviewer User
Date of the Interview:	_____ / _____ / _____ Day Month Year
Name of the Institution:	Community/Location:
Date of Birth of the User:	_____ / _____ / _____ Day Month Year
Name of the Interviewer:	
Type of SDM tool used: Cycle beads ____ User Card ____	
INTRODUCTION	
1 a. How did you hear about the Standard Days Method? (Mark all that apply) 1__ Presentation 2__ Someone visited me in my home 3__ Handouts 4__ Flyers 5__ Radio Ad 6__ Bullhorn in the community 7__ Health service 8__ Other: _____	
1 b. Who told you about the Standard Days Method? (Mark all that apply) 1__ Healthcare provider 2__ Neighbor 3__ Family member 4__ SDM Instructor 5__ Health promoter 6__ Husband 7__ Other _____	

APPENDIX C: ADMISSION FORM

2. Did your husband receive instructions on how to use the Method? **(Read the options)**

- 1___ Yes → From who? 1___ You
2___ Healthcare provider
3___ No one
4___ Other (Specify): _____
- 2___ No

3 a. Have you recently received instructions on how to use the Standard Days Method ? Are you using it?

- 1___ Yes → **SKIP TO QUESTION 4**
2___ No

3 b. Why aren't you using the Standard Days Method?

- 1__ Esposo no esta de acuerdo
2__ I didn't like using it
3__ I didn't understand how to use it
4__ Other _____

END THE INTERVIEW

INTERVIEWER: VERIFY IF THE SDM IS AN APPROPRIATE METHOD FOR THIS COUPLE

4. When was the first day of your last period?

_____/_____/_____
Day Month Year

5. When do you expect your next period to start?

_____/_____/_____
Day Month Year

INTERVIEWER: IF THE USER DOES NOT KNOW, CALCULATE THE DATE BASED UPON THE FIRST DAY OF HER LAST PERIOD, ASSUMING THAT HER CYCLE IS 30 DAYS LONG

6. INTERVIEWER: USING A CALENDAR COUNT THE NUMBER OF DAYS OF HER CYCLE (START ON THE FIRST DAY OF HER LAST PERIOD AND END ON THE DAY BEFORE SHE EXPECTS TO GET HER NEXT PERIOD)

Expected duration of the cycle: 1_____ Between 26-32 days → **She can use the Method**

However, if the length of her cycle is 2_____ Less than 26 days

or

→ **The Method isn't appropriate for the couple**

3_____ More than 32 days

→ **End the interview and tell the provider, mark this box**

APPENDIX C: ADMISSION FORM

7. Are you breastfeeding? 1___ Yes → Skip to question 8. 2___ No → Skip to question 9.
8. How many times have you had your period since you have been breastfeeding? 1___ I still haven't gotten my period → The Method is not appropriate for this couple End the interview. 2___ Less than 4 times → Speak with an instructor to determine whether or not she should begin using the Method. 3___ 4 or more times → Continue with the interview.
9. Are you taking oral contraceptives to prevent pregnancy? 1___ Yes → The Method is not appropriate for the user. End the interview. Refer the user to a health provider. Mark the box. <input type="checkbox"/> 2___ No
10. Have less than three months passed since you received your last injection? 1___ Yes → The Method is not appropriate for the user. End the interview. Refer the user to a health provider. Mark the box. <input type="checkbox"/> 2___ No
INTERVIEWER: VERIFY THAT THE USER CAN PARTICIPATE IN THE STUDY
11. Would you like to become pregnant during the next 8 months? 1___ Yes → End the interview, but she can use the Method. 2___ No
12. Will you be able to mark the calendar or user card on the first day of your period every month? 1___ Yes 2___ No → End the interview, but she can use the Method.
GENERAL QUESTIONS
13. How old are you? (woman) _____
14. How old are you? (man) _____

APPENDIX C: ADMISSION FORM

<p>15a. What is the highest level of schooling you have finished?</p> <p>Put an "X" for the educational level and circle the highest number of years completed</p> <p>1___ I never went to school 2___ Primary 1 -2 -3 -4 -5 -6 3___ Basic (Middle) 7 - 8 -9 4___ High School 1 -2 -3 -4 5___ Technical/Vocational 1 -2 -3 6___ University 1 -2 -3 -4 -5 -6</p>	<p>15b. What is the highest level of schooling you have finished?</p> <p>Put an "X" for the educational level and circle the highest number of years completed</p> <p>1___ I never went to school 2___ Primary 1 -2 -3 -4 -5 -6 3___ Basic (Middle) 7 - 8 -9 4___ High School 1 -2 -3 -4 5___ Technical/Vocational 1 -2 -3 6___ University 1 -2 -3 -4 -5 -6</p>
<p>16. How many children do you have?</p>	
<p>17. As a couple, have you ever used a method family planning to prevent pregnancy? (INTERVIEWER: When they begin to respond, ask: Something else to add? (to motivate them to remember other methods of family planning that they may have used in the past) Mark all of the responses mentioned</p> <p>1_____ We have never used any method to prevent pregnancy? → Skip to Question 19.</p> <p>2_____ Have you ever abstained from sex during certain days?</p> <p>Continue probing...</p> <p>1___ Periodic abstinence 2___ Withdrawal 3___ LAM 4___ Condom 5___ Vaginal suppositories 6___ Oral contraceptives 7___ Injection 8___ Norplant 9___ Vasectomy 10___ Female sterilization 11___ IUD 12___ Other (Specify)_____</p>	

APPENDIX C: ADMISSION FORM

18. In the past two months, which method of family planning were you using before you began using the Standard Days Method?

MARK ALL OF THE RESPONSES MENTIONED

- 1__ Nothing/no method
- 2__ Periodic abstinence
- 3__ Withdrawal
- 4__ LAM
- 5__ Condom
- 6__ Vaginal suppositories
- 7__ Oral contraceptives
- 8__ Injection (**Verify Question 10**)

- 9__ Vasectomy (**Verify Question 18**)
- 10__ Female Sterilization (**Verify Question 18**)
- 11__ Norplant

- 12__ IUD
- 13__ Other (Specify)_____



**End the interview.
Refer the user to a
health promoter.
Mark this box.**

19. Why did you choose to use the Standard Days Method instead of using another family planning option?

MARK ALL OF THE RESPONSES MENTIONED

- 1__ It is low-cost/cost-effective
 - 2__ My husband opposes using another method
 - 3__ It doesn't affect my health and doesn't have side effects/I don't have to take or use anything/It does not effect breastfeeding
 - 4__ Religious/moral reasons
 - 5__ It is easy to use
 - 6__ It is effective
 - 7__ Other (Specify)
- _____

20. What have you and your husband decided to do during the fertile days?

- 1__ Abstinence 2__ Use a condom 3__ Use both a condom and practice abstinence
- 4__ Withdrawal 5__ Other (Specify) _____

COMMENTS:

[Large grey rectangular area for handwritten comments]

APPENDIX D: CLIENT FOLLOW-UP QUESTIONNAIRE

CLIENT# _____-_____-_____-_____-_____

FOLLOW-UP QUESTIONNAIRE

Standard Days Method

Write the number corresponding to this follow-up interview



Follow-Up Month

_____1

_____3

_____6

APPENDIX D: CLIENT FOLLOW-UP QUESTIONNAIRE
FOLLOW-UP INSTRUMENT

TO BE FILLED OUT BY THE INTERVIEWER	
CLIENT'S IDENTIFICATION CODE	____ - ____ - ____ - ____ - ____ Country City Provider Interviewer User
CLIENT'S BIRTH DATE	____ / ____ / ____ Day / Month / Year
INTERVIEW DATE:	____ / ____ / ____ Day / Month / Year
DATE OF LAST INTERVIEW:	____ / ____ / ____ Day / Month / Year

INTERVIEW ATTEMPTS:

First Attempt – Date: ____/____/____

Result

- | | | |
|-----------------------------------|---------|-----------------------------|
| 1____ Available to be interviewed | → → → → | Has she had her period? |
| 2____ Not at home [Return] | | 1____ Yes → Skip to Q.2 |
| 3____ Inconvenient time [Return] | | 2____ No → Return in 7 days |
| 4____ Moved away | | (Return on ____/____) |
-

Second Attempt – Date: ____/____/____

Result

- | | | |
|-----------------------------------|---------|-----------------------------|
| 1____ Available to be interviewed | → → → → | Has she had her period? |
| 2____ Not at home [Return] | | 1____ Yes → Skip to Q.2 |
| 3____ Inconvenient time [Return] | | 2____ No → Return in 7 days |
| 4____ Moved away | | (Return on ____/____) |
-

Third Attempt – Date: ____/____/____

Result

- | | | |
|-----------------------------------|---------|-----------------------------|
| 1____ Available to be interviewed | → → → → | Has she had her period? |
| 2____ Not at home [LFU] | | 1____ Yes → Skip to Q.2 |
| 3____ Inconvenient time [LFU] | | 2____ No → If cycle is more |
| 4____ Moved away [LFU] | | than 42 days, do pregnancy |
| test and | | |

APPENDIX D: CLIENT FOLLOW-UP QUESTIONNAIRE

continue with Q.1.

If you are able to find out her new address and are you are able to go there, contact the client and schedule an interview.

If you are unable to find out her new address or if it is too far away to visit mark the box below

Client could not be found after 3rd attempt and is lost to follow-up. Complete the Lost-to-follow-up form.

2. ¿Are you still using the method?

1) _____ Yes

2) _____ No → **Use exit form**

3. **Interviewer:** Ask the user to show her calendar y the necklace or user card. Look at the calendar and check the duration of her last cycles since the last time she was interviewed. (Count the days, beginning with the first day of her period and stopping at one day before her period returned).

Date of her most recent period ___/___/___ _____ Day in the current cycle
 Date of the last period ___/___/___ _____ Days in the last cycle anterior
 Date of the next-to-the-last period ___/___/___ _____ Days in the next-to-last-cycle

IF THE CLIENT HAS LOST HER CALENDAR THEN RECORD MOST CURRENT DATA AS CLIENT REMEMBERS. NOTE ON Q.25 THAT CALENDAR IS MISSING AND GIVE HER A NEW ONE. IF CLIENT CAN'T REMEMBER DATES, DO NOT FILL THEM IN.

IF THE USER HAS HAD MORE THAN ONE CYCLE LES THAN 26 OR MORE THAN 32 DAYS, DON'T CONTINUE WITH THE INTERVIEW AND FILL OUT THE EXIT FORM. MARK THE BOX BELOW.

APPENDIX D: CLIENT FOLLOW-UP QUESTIONNAIRE

4	<p>INTERVIEWER: Look at the user card or necklace and calendar (count the days since first day of her last period that she marked on her calendar and verify that it corresponds to the number of beads that have been marked off, or the number of symbols filled in on the user card) .</p> <p>1) _____ Doesn't have it</p> <p>2) _____ Has it and is correct</p> <p>3) _____ Has it and is incorrect</p>
4a	<p>¿Was it necessary to replace the necklace?</p> <p>1) _____ Yes → ¿Why did you replace it? → 1) _____ It was lost</p> <p>2) _____ No</p> <p style="margin-left: 400px;">2) _____ Necklace broken</p> <p style="margin-left: 400px;">a) _____ The ring broke</p> <p style="margin-left: 400px;">b) _____ Other _____</p> <hr/> <p>¿Was it necessary to replace the user card?</p> <p>1) _____ Yes → ¿Why did you replace it? → 1) _____ It was lost</p> <p>2) _____ No</p> <p style="margin-left: 400px;">2) _____ User card in bad condition</p> <p style="margin-left: 400px;">a) _____ The user card is illegible</p> <p style="margin-left: 400px;">b) _____ It's torn</p> <p style="margin-left: 400px;">b) _____ Other</p> <p>_____</p>
4b	<p>INTERVIEWER: Is the ring on the correct bead? Or are the correct symbols filled in?</p> <p>1) _____ Yes</p> <p>2) _____ No → At the end of the interview help her to place the ring on the correct bead or to mark the correct symbol.</p>

APPENDIX D: CLIENT FOLLOW-UP QUESTIONNAIRE

Interviewer: Note responses offered spontaneously on left side of box. For items not mentioned, ask about them and mark the prompted boxes			
5	CAN YOU EXPLAIN TO ME HOW YOU ARE USING THE NECKLACE?		
	Spontaneous	Prompted	
A	1)___Yes	1)___No	➔ Move black band to the red bead when period starts
B	1)___Yes	1)___No	➔ Mark first day of period on calendar
C	1)___Yes	1)___No	➔ Move black band one bead every day
D	1)___Yes	1)___No	➔ No unprotected sex on white bead days
E	1)___Yes	1)___No	➔ Unprotected sex allowed on dark bead days

6	¿Can you explain to me how you are using the user card?		
	Spontaneous	Suggested	
A	1)___Yes	1)___No	➔ Mark the tear drop when her period begins
B	1)___Yes	1)___No	➔ Mark the first day of her period in the calendar
C	1)___Yes	1)___No	➔ Mark the symbol that follows in the direction of the arrow each day
D	1)___Yes	1)___No	➔ No unprotected sex during fertile days (during the square symbols)
E	1)___Yes	1)___No	➔ Unprotected sex allowed on the circle symbol days
7	<p>Necklace user How did you know if your cycle is too short to use the SDM (Don't read the answer, mark those mentioned).</p> <p>1) _____ If my period comes before reaching the dark bead. 2) _____ If I reach the end of the necklace and my period has not returned. 3) _____ Don't know 4) _____ Other _____</p> <p>User card user How did you know if your cycle is too short to use the SDM ? (day26)? (Don't read the answer, mark those mentioned)</p> <p>1) _____ If my period comes before getting to the large circle 2) _____ If I come to the final symbol and my period has not returned 3) _____ Don't know 4) _____ Other _____</p>		

APPENDIX D: CLIENT FOLLOW-UP QUESTIONNAIRE

8	<p>Necklace User How do you know if your cycle is too long to use the SDM? (Don't read the answer, mark those mentioned)</p> <p>1) _____ If I come to the end of the necklace and my period hasn't come 2) _____ Don't know 3) _____ Other _____</p> <p>Carnet User How do you know if your cycle is too long to use the SDM? (Don't read the answer, mark those mentioned)</p> <p>1) _____ If I've filled in the final symbol on the necklace, and my period hasn't come 2) _____ Don't know 3) _____ Other _____</p>
9	<p>Necklace User Do you move the ring everyday, including those days when you have your period?</p> <p>1) _____ Yes 2) _____ No</p> <p>User of the user card Do you fill in a symbol each day, including those days when you have your period?</p> <p>1) _____ Yes 2) _____ No</p> <p>Interviewer: Advise the user to move the ring each day or to fill in a symbol each day</p>
10	<p>Do you continue to use the necklace/user card to track the days of your cycle?</p> <p>1) _____ Yes → Skip to question 10 2) _____ No</p>
10a	<p>What do you do?</p> <p>1) _____ Mark a calendar 2) _____ Other (specify): _____</p>
11	<p>Normally, who marks the first day of your period on the calendar?</p> <p>1) _____ User 2) _____ Husband 3) _____ Other (specify) _____</p>

APPENDIX D: CLIENT FOLLOW-UP QUESTIONNAIRE

12	<p>Interviewer: Show the user the user card or the necklace and ask the following questions:</p> <p>If you don't wish to become pregnant, when should you avoid unprotected sex?</p> <p>1) _____ during the white beads/square symbols 3) _____ Between days 8-19</p> <p>2) _____ brown beads/circle symbols 4) _____ Other (specify)</p> <p align="right">_____)</p>
13	<p>Necklace user During your last cycle, did you have sexual relations without protection when the ring was on the white beads?</p> <p>1) _____ Yes</p> <p>2) _____ No → Skip to question 13</p> <p>User card user During your last cycle, did you have unprotected sex, when you were on a square symbol?</p> <p>1) _____ Yes</p> <p>2) _____ No → Skip to question 13</p>
13a	<p>¿Why did you have relations during the fertile days without taking precautions?</p> <p>1) _____ I forgot/was confused</p> <p>2) _____ My husband insisted</p> <p>3) _____ Condoms weren't available</p> <p>4) _____ No particular reason</p> <p>5) _____ OTHER _____</p>

APPENDIX D: CLIENT FOLLOW-UP QUESTIONNAIRE

<p>14</p>	<p>Necklace user In those days when the ring is on a white bead, what have you done to prevent pregnancy?</p> <p>1_____ no relations/abstinence</p> <p>2_____ condom</p> <p>3_____ abstinence and condom</p> <p>4_____ withdrawal</p> <p>5_____ nothing</p> <p>6_____ other/specify_____</p> <hr/> <p>User card user In the days that you are in one of the square symbols, what have you done to avoid pregnancy?</p> <p>1_____ no relations/abstinence</p> <p>2_____ condom</p> <p>3_____ abstinence and condom</p> <p>4_____ withdrawal</p> <p>5_____ nothing</p> <p>6_____ other/specify_____</p> <hr/>
<p>15</p>	<p>Necklace user How does your husband participate in the use of the necklace? (mark all the answers)</p> <p>1. _____ He reminds me to move the ring</p> <p>2. _____ buys condoms</p> <p>3. _____ Uses condoms</p> <p>4. _____ Abstinence</p> <p>5. _____ Marks the symbols</p> <p>6. _____ we agree about when to have relations</p> <p>7. _____ He doesn't participate</p> <p>8. _____ Other_____</p> <p>User card user How does your husband participate in the use of the user card? (mark all answers)</p> <p>1_____ He reminds me to mark the card</p> <p>2_____ buys condoms</p>

APPENDIX D: CLIENT FOLLOW-UP QUESTIONNAIRE

	<p>3. _____ Uses condoms 4. _____ Abstinence 5. _____ Marks the symbols 6. _____ we agree about when to have relations 7. _____ He doesn't participate 8. _____ Other _____</p>
16	<p>Do you plan to continue using this method for the next three months?</p> <p>1) _____ Yes → Skip to question 16</p> <p>2) _____ No</p>
16a	<p>Reason the user wants to abandon the method: (Mark only one answer)</p> <p>1) _____ Two or more cycles out of range 2) _____ Wants a pregnancy 3) _____ It doesn't Project against STIs. 4) _____ Doesn't have frequent/regular sexual relations 5) _____ Husband opposed 6) _____ Difficult to user/Don't understand well enough 7) _____ Not safe/fear of pregnancy 8) _____ Other _____ 9) _____ Want to change to other method →</p> <p>→ What method do you want to use? _____</p>
17	<p>COMMENTS</p>

APPENDIX E: EXIT OR DISCONTINUATION OF METHOD USE FORM

EXIT OR DISCONTINUATION OF METHOD USE FORM

Use this form upon completion of six cycles, if the user quits using the method
or if the user does not wish to continue in the study

If the user is pregnant, don't use this form, use the pregnancy form

EXIT FORM	
Write down the user's identification number. Also write down her information in the Code of Users book.	_____ - _____ - _____ Dept. Organization Teacher _____ - _____ Interviewer User
Date of the Interview:	____ / ____ / ____ Day Month Year
Name of the Institution:	Community/Location:
Date of Birth of the User:	____ / ____ / ____ Day Month Year
Name of the Interviewer:	
Type of SDM tool used: Cycle beads ____ User Card ____	
Reason for which the user left the study: (Mark only one response)	
1) _____ Completed 6 or more cycles (and is not pregnant) 2) _____ Two or more out of range cycles 3) _____ Wanted to get pregnant → SKIP TO QUESTION 5a 4) _____ Wanted to switch to another method 5) _____ User does not practice regular sex 6) _____ Husband opposes use of the Method 7) _____ Hard to use/Does not understand how to use 8) _____ Ineffective/Fear of pregnancy 9) _____ Other _____	

APPENDIX E: EXIT OR DISCONTINUATION OF METHOD USE FORM

PREGUNTE:	
1	<p>Will you continue to use the Method to avoid becoming pregnant?</p> <p>1) _____ Yes → SKIP TO QUESTION 5</p> <p>2) _____ No → Why not? →</p> <p>1) _____ Completed 6 or more cycles (and is not pregnant)</p> <p>2) _____ Two or more out of range cycles</p> <p>3) _____ Wanted to get pregnant → SKIP TO QUESTION 5a</p> <p>4) _____ Wanted to switch to another method</p> <p>5) _____ User does not practice regular sex</p> <p>6) _____ Husband opposes use of the Method</p> <p>7) _____ Hard to use/Does not understand how to use</p> <p>8) _____ Ineffective/Fear of pregnancy</p> <p>9) _____ Other _____</p>
2.	<p>Will you continue to use a family planning method so that you do not become pregnant?</p> <p>1) _____ Yes → SKIP TO QUESTION 3</p> <p>2) _____ No</p>
2a	<p>Why Not?</p> <p>SKIP TO QUESTION 5</p>
3	<p>What method will you use to avoid becoming pregnant?</p> <p>1) _____ Periodic Abstinence</p> <p>2) _____ Withdrawal</p> <p>3) _____ LAM</p> <p>4) _____ Condom</p> <p>5) _____ Vaginal suppositories</p> <p>6) _____ Oral contraceptives</p> <p>7) _____ Injectable</p> <p>8) _____ Vasectomy</p> <p>9) _____ Female Sterilization</p> <p>10) _____ IUD</p> <p>11) _____ Norplant</p> <p>12) _____ Other</p>
4	<p>Why do you prefer this method and not the Standard Days Method?</p> <p>1) _____ Irregular cycles</p> <p>2) _____ More effective</p> <p>3) _____ My husband does not participate in method use</p> <p>4) _____ Easy to use</p> <p>5) _____ I do not want any more children</p> <p>Other _____</p>

APPENDIX E: EXIT OR DISCONTINUATION OF METHOD USE FORM

5	<p>For women: Does your husband/partner participate in some way in your use of the Standard Days Method?</p> <p>How does he participate?</p> <p>1) _____ Helps to mark the calendar 2) _____ Buys condoms 3) _____ Uses condoms 4) _____ Practices abstinence 5) _____ Moves the ring/marks the user card 6) _____ Follows instructions on how to use the Method 7) _____ Other_____</p>	Yes: 1	No: 2
5a	<p>For men: (if present) Do you participate in your wife/partner's use of the Standard Days Method?</p> <p>¿How do you participate?</p> <p>1) _____ Help to mark the calendar 2) _____ Buy condoms 3) _____ Use condoms 4) _____ Practice abstinence 5) _____ Move the ring/mark the user card 6) _____ Follow instructions on how to use the Method 7) _____ Other_____</p>	Yes: 1	No: 2
6a	<p>For women: What do you do during your fertile days (when the ring is on a white bead day or when one of the symbols on the user card is a square day) so that you do not become pregnant? (Read the options)</p>	<p>1. _____ We use a condom 2. _____ We practice abstinence 3. _____ We use a condom and practice abstinence 4. _____ Withdrawal 5. _____ We use a condom and withdrawal 6. _____ Other_____</p>	
6b	<p>For men: (if present) What do you do during your wife/partner's fertile days so that you do not get her pregnant (when the ring is on a white bead day or when one of the symbols on the user card is a square day)? (Read the options)</p>	<p>1. _____ We use a condom 2. _____ We practice abstinence 3. _____ We use a condom and practice abstinence 4. _____ Withdrawal 5. _____ We use a condom and withdrawal 6. _____ Other_____</p>	

APPENDIX E: EXIT OR DISCONTINUATION OF METHOD USE FORM

7	<p>CYCLEBEADS USER Did you have unprotected sex during a fertile (when the ring was on a white bead) day?</p> <p>USER CARD USER Did you have unprotected sex during a fertile (when the symbol was square) day?</p> <p>1) _____ Yes</p> <p>2) _____ No → SKIP TO QUESTION 8</p>	
7a	<p>¿Why did you have unprotected sex during a fertile day?</p> <p>1) _____ I forgot</p> <p>2) _____ I was confused</p> <p>3) _____ My husband/partner insisted on having sex</p> <p>4) _____ I did not have a condom available</p> <p>5) _____ Disregard for instructions</p> <p>6) _____ Other _____</p>	
8	<p>For women: Has using the SDM changed your relationship with your husband/partner?</p> <p style="text-align: center;">How did it change?</p> <p>1) _____ Yes → 1) _____ Positive effect</p> <p>2) _____ No 2) _____ Negative effect</p>	
8a	<p>For men: Has using the SDM changed your relationship with your wife/partner?</p> <p style="text-align: center;">How did it change?</p> <p>1) _____ Yes → 1) _____ Positive effect</p> <p>2) _____ No 2) _____ Negative effect</p>	
9	<p>What do you like about using the Standard Days Method? (Mark all that apply)</p>	<p>1. _____ No side effects</p> <p>2. _____ Do not have to take anything</p> <p>3. _____ Safe</p> <p>4. _____ Easy to use</p> <p>5. _____ Effective</p> <p>6. _____ It helps me to know my fertile days</p> <p>7. _____ Other _____</p> <p>8. _____</p>

APPENDIX E: EXIT OR DISCONTINUATION OF METHOD USE FORM

10	<p>What didn't you like about using the Standard Days Method? (Mark all that apply)</p>	<p>1. _____ Need to have regular cycles 2. _____ Not safe 3. _____ Difficult to remember to move the ring/mark the user card 4. _____ Difficult to practice abstinence 5. _____ Difficult to use a condom during fertile days 6. _____ Other _____</p>
11	<p>Were the Cycle beads/user card easy or difficult to use?</p> <p>1) _____ Easy 2) _____ Difficult → Why? _____</p>	
12	<p>Were the Cycle beads/user card easy or difficult to learn how to use?</p> <p>1) _____ Easy 2) _____ Difficult → Why? _____</p>	
13	<p>CYCLE BEADS USER Was it easy or difficult for you to remember to move the black ring of your Cycle beads everyday?</p> <p>1) _____ Easy 2) _____ Difficult → Why? _____</p> <p>USER CARD USER Was it easy or difficult for you to remember to mark the symbols on your user card everyday?</p> <p>1) _____ Easy 2) _____ Difficult → Why? _____</p>	
14	<p>Was it easy or difficult for you husband to cooperate in using the Method?</p> <p>1) _____ Easy 2) _____ Difficult → Why? _____</p>	
15	<p>Was it difficult for your husband to remember to mark the calendar?</p> <p>1) _____ Easy 2) _____ Difficult → Why? _____</p>	
16	<p>Was it easy or difficult for you to manage the fertile days?</p> <p>1) _____ Easy 2) _____ Difficult → Why? _____</p>	

APPENDIX E: EXIT OR DISCONTINUATION OF METHOD USE FORM

17	<p>Was it easy or difficult for your husband to manage the fertile days?</p> <p>1) _____ Easy 2) _____ Difficult → Why? _____</p>
18	<p>Did you and your husband come to an agreement about abstaining from sex during certain days?</p> <p>1) _____ Yes 2) _____ No</p> <p>How did you both come to this agreement?</p> <p>_____</p> <p>_____</p> <p>_____</p>
19	<p>Was it useful for you to mark the first day of your period on the calendar?</p> <p>1) _____ Yes → In which way? _____ 2) _____ No _____</p>
20	<p>If you do not want to get pregnant, when must you avoid unprotected sex?</p> <p>1) _____ White bead days/square days 2) _____ Days 8-19 3) _____ Brown bead days/circle days 4) _____ Other (Specify) _____</p>
21	<p>Interviewer observations:</p> <p>Was the husband/partner present during the interview?</p> <p>1) _____ During the entire interview 2) _____ During part of the interview 3) _____ He was not present</p>
22	<p>COMMENTS:</p>

THANK USERS FOR THEIR TIME AND COOPERATION

APPENDIX F: PREGNANCY FORM

	<p>USER CARD USER During your last menstrual cycle, was there ever a day when you had sex knowing that your User card was on a square (fertile) day?</p> <p style="text-align: center;">1_____ Yes</p> <p style="text-align: center;">2_____ No</p>
9	<p>CYCLE BEADS USER During your last menstrual cycle, was there ever a day when you had sex and later realized that your Cycle beads were on a white bead (fertile) day?</p> <p style="text-align: center;">1_____ Yes 2_____ No</p> <p>USER CARD USER During your last menstrual cycle, was there ever a day when you had sex and later realized that your User card was on a square (fertile) day?</p> <p style="text-align: center;">1_____ Yes 2_____ No</p>
10	<p>CYCLE BEADS USER During your white bead days do you use another method?</p> <p style="text-align: center;">1_____ Yes 2_____ No → SKIP TO QUESTION 12</p> <p>USER CARD USER During your square days to you use another method</p> <p style="text-align: center;">1_____ Yes 2_____ No → SKIP TO QUESTION 12</p>
11	<p>¿What method did you use during these days? (Mark only one response)</p> <p style="text-align: center;">1_____ Condom</p> <p style="text-align: center;">2_____ Withdrawal</p> <p style="text-align: center;">3_____ Both condom and withdrawal</p> <p style="text-align: center;">4_____ Other _____</p>
12	<p>CYCLE BEADS USER During your last menstrual cycle, did your husband/partner insist in having sex even though you were experiencing a white bead (fertile) day?</p> <p style="text-align: center;">1_____ Yes 2_____ No</p> <p>USER CARD USER During your last menstrual cycle, did your husband/partner insist in having sex even though you were experiencing a square (fertile) day?</p> <p style="text-align: center;">1_____ Yes 2_____ No</p>
<p><u>COMMENTS:</u> Thank the user for her participation</p>	

APPENDIX G: FOCUS GROUP GUIDE FOR PROVIDERS

Comparing Service Delivery Modes in Guatemala

Objectives

1. Assess provider knowledge of how to provide the SDM using the user card and CycleBeads.
2. Compare the acceptability among providers of the two modes of service provision for the SDM-the user card and CycleBeads.

Acceptability of SDM

1. Now that you have been offering the SDM for about _____ months, what do you think of it? What do you like about it? What don't you like about it? Why?
2. What problems have you had providing the SDM? Have you been able to solve them? How?
3. How acceptable is the SDM in the communities you work? What comments have you heard from community members about the SDM?
4. What type(s) of clients would you recommend the SDM to? What types of clients should not use the SDM? What type(s) of clients request the SDM?
5. How feasible is it for programs like yours to offer the SDM? Why?

Acceptability of two modes of service provision – user card/carnet & CycleBeads

1. How acceptable is the user card in the communities you work? What about CycleBeads? Is there a preference for one or the other? Why?
2. Do client's partners prefer the card or the Cycle Beads? Why do you think this is the case?
3. Did any of your client's request the user card after being assigned to the Cycle Beads? Did any request the Cycle Beads after being assigned to the user card? What were their reasons for wanting to change?
4. Have you noted any differences in method use between clients using the user card and those using the Cycle Beads? Could you offer some examples?
5. Do you think the user card/carnet is more effective in involving men in method use? Why?

APPENDIX G: FOCUS GROUP GUIDE FOR PROVIDERS

6. In your opinion, do you prefer the CycleBeads or the carnet as an aid for using the Standard Days Method? Why?
7. Which aid do you find easier to explain to your clients?
8. Have you encountered any problems providing the user card/carnet? With the Cycle Beads? What were the problems? Where you able to solve them? How did you solve them?
9. What type of women would you recommend the user card/carnet to? The Cycle Beads? What type of women should not use the user card/carnet? The Cycle Beads?

Recommendations

1. How adequate was the training you received on the SDM? How could it be improved? What type of additional training or support would you like to receive?
2. What recommendations do you have to improve SDM services using the user card and/or CycleBeads? What obstacles or problems could arise?
3. What recommendations do you have to improve the format or content of the user card? What recommendations do you have to improve the CycleBeads?