

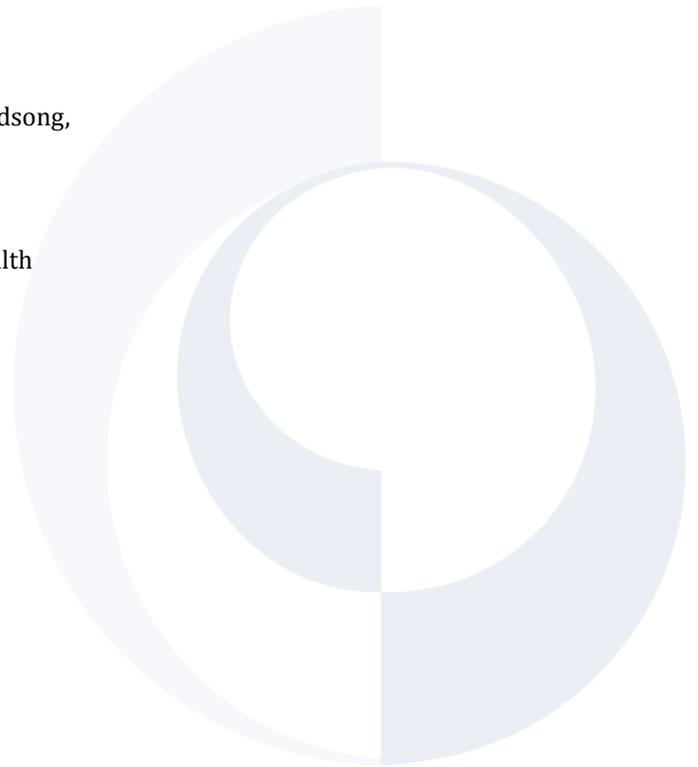
Offering the Standard Days Method® (SDM) in Small Shops (“Boutiques”) in Rural Mali

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Offering the Standard Days Method (SDM) in Small Shops (“Boutiques”) in Rural Mali

Executive Summary

Lack of availability and limited access to health services, contraceptive commodities and/or health providers can be a deterrent to utilizing family planning (FP) and reproductive health services. In rural areas of Mali, where health facilities are far from many potential clients, providing FP products which do not require health facilities or provider assistance can play a potential significant role in increasing FP use. Small stores or “boutiques”, which provide families access to food and household supplies, can also be a source of contraceptives. This two-phase study examines the provision of CycleBeads®, the visual tool that supports use of the Standard Days Method® (SDM) of FP, to communities through boutiques, a non-traditional service delivery setting. The purpose of Phase I was to revise the package insert—the brochure that is included with every package of CycleBeads—explaining how to use SDM, so an eligible SDM user could understand and use it without provider assistance. Phase II, which will take place immediately following Phase I, will assess the effect of offering CycleBeads through boutiques on correct use of SDM with the revised instructional insert. The findings presented here focus on Phase I.

Interviewers recruited 50 adults (N = 25 men of any age, and N = 25 women, 15-49 years of age) randomly from local markets in Koulikoro and Segou districts for the first round of insert testing. The tested insert had one side with illustrations and simple phrases describing how to use CycleBeads, while the other side had illustrations only. Based on results of this testing, the insert was revised, adapted, and re-tested (two additional rounds) with another group of 100 individuals, all of whom had at least primary level of education, in the same two areas of Mali. The pictorial side of the insert was eliminated, as participants better understood the messages when the images were accompanied by brief explanations (images + text side). During the fourth round, we tested only two panels of the insert, to confirm comprehension of two specific concepts with 52 participants.

Male participants were significantly more likely to have never attended school in the district of Segou as compared to Koulikoro district (Fisher’s exact test, $p=0.03$), in the first round of insert testing. No significant differences were found among female participants’ education in the two regions. Due to varying levels of comprehension between men and women, male and female participants were recruited with at least primary level of education or higher in the remaining rounds of testing, to ensure their ability to read and understand the insert. Although most of the insert remained the same, small changes were made to the insert according to concepts not understood by participants or traditionally challenging for SDM users. Responses to the panel titled “Who Can Use CycleBeads”, for example, showed that this panel was not understood well by men or women.

As a result of these findings, the following changes were made:

- Increased the size of the images of an eligible woman and a couple discussing FP in bed.
- Added a “red drops” image to the calendar and the red bead (Figure 3), to clarify the instruction to the user to move the ring to the first red bead on the first day of the menstrual period and to mark the calendar on the first day of a woman’s menstrual period.
- Added the same “red drops” image, in order to increase study participants’ comprehension of the significance of the onset of a woman’s menstrual period before the rubber ring reaches the dark brown bead.
- Added arrows to demonstrate how to count the days that have passed since the first day of the menstrual period on the calendar and the CycleBeads.
- Added an image of a provider-client consultation to strengthen poor comprehension of the concepts of “when to return to a provider”, with four arrows pointing to four scenario images (of possible reasons).

Changes to recruitment criteria resulted in sustained improvements in levels of comprehension in Rounds 2, 3 and 4. In round 2 testing, comprehension of male participants improved for all concepts illustrated in the insert, except recognition of CycleBeads as a FP method, and was comparable to women’s level of comprehension in Round 1 (Figure7). Specifically, understanding of the following concepts increased:

- What to do on the first day, monitoring cycle length.
- What to do when a woman forgets to move the ring.
- When to see a provider.

Our findings revealed that the linkages between the concepts “CycleBeads represent the menstrual cycle” and “CycleBeads is a FP method” were not clearly understood. To improve comprehension, we added a description of CycleBeads to the “What is CycleBeads” panel - “CycleBeads is a necklace that represents the menstrual cycle. Each bead represents one day of the cycle” (Figure 8). Although 6-15 fold increases were found in comprehension of “when to return to a provider,” in Round 2 in comparison to Round 1, the addition of a “red cross” poster helped to clarify the concept that a provider-client consultation was occurring at the health center.

In comparison to Round 2 testing, Round 3 findings reveal a 5 -10-fold increase in study participants’ understanding of the concept “CycleBeads represent the menstrual cycle” (Figure 12). Participants also were able to relay information on “who can use the CycleBeads” and correctly specify SDM eligibility criteria to interviewers. Specifically, 90% of men and all women understood that SDM is for women with menstrual periods that come about once a month. About three-fourths of women and 62% of men understood that couples who communicate with each other well and accept to abstain or use a condom on fertile days can use the method.

Comprehension of when to see a health provider improved for women over the four rounds of testing, yet remained at the same or lower level for men.

In Round 4, the study team felt that the “red drops” image used to indicate the first day of the menstrual period should not be used to indicate a different and contrasting concept of a short menstrual cycle (i.e. when a woman’s period arrives before reaching the dark brown bead). Therefore, the red drops image was replaced with the words “period too soon.” Messages were still understood to a sufficient level of comprehension (most concepts were 81% and above). For messages identifying long and short cycles and the need to see a provider, it was decided that slightly lower than desired levels of male comprehension (65 and 69%) were sufficient, given the large increase in comprehension that was achieved.

Moving forward, although the original intent was to develop a pictorial-based insert (with minimal to no wording) for the general Malian population, our results indicate this is not an effective approach. These findings have implications for other countries, as the instructional insert must have images accompanied by descriptive wording, in order for users to understand on their own how to use CycleBeads/SDM. Therefore, in the future, direct-to-consumer approaches should be specifically targeted to a niche of men and women with at least some primary level of education or higher, as it is critical that users are able to read and understand the text used to explain how to use the SDM/CycleBeads. The next step will be to design Phase II of the study and generate demand creation activities (i.e. local radio spots) targeted to Malians with basic literacy skills. These spots will advertise the benefits and availability of CycleBeads for purchase in local stores or boutiques. In this phase, we will study the uptake of CycleBeads through boutiques and follow users to ascertain correct use of the method, with the revised instructional insert.

Proposer la Méthode des Jours Fixes (MJF) dans les petits magasins ou « boutiques » des zones rurales au Mali

Résumé

Le manque de disponibilité conjugué à l'accès limité aux services de santé, aux produits contraceptifs et/ou aux prestataires de soins de santé est susceptible de dissuader le recours à la planification familiale (PF) ainsi qu'aux services de santé de la reproduction. Dans les zones rurales du Mali, où les centres de santé sont très éloignés de nombreux clients potentiels, le fait de fournir des produits de PF qui ne nécessitent ni l'aide d'un prestataire ni une visite à un établissement de santé peut jouer un rôle primordial pour renforcer le recours à la PF. Les petits magasins ou « boutiques », qui permettent aux familles d'avoir accès à des aliments et à des produits ménagers, peuvent également être une source de contraceptifs. Cette étude en deux phases examine comment fournir le Collier du Cycle® (l'outil visuel qui facilite l'utilisation de la Méthode des Jours Fixes® (MJF) de la PF) aux communautés par le biais des boutiques, en d'autres termes dans un contexte non traditionnel de fourniture de services. Le but de la première phase

consistait à réviser la documentation insérée dans le paquet – à savoir la brochure que l'on trouve dans chaque paquet de Collier du Cycle – expliquant comment utiliser la MJF, de sorte qu'un utilisateur remplissant les conditions requises puisse comprendre et utiliser ladite méthode sans l'aide d'un prestataire. Quant à la deuxième phase, qui se déroulera immédiatement après la première, elle permettra d'évaluer les conséquences à proposer le Collier du Cycle en boutique pour une utilisation correcte de la MJF grâce à la brochure révisée sur les consignes d'emploi. Les résultats présentés ici portent sur la première phase.

Pour la première ronde du test de la brochure, les enquêteurs ont recruté aléatoirement 50 adultes (N = 25 hommes de tous âges, et N = 25 femmes âgées de 15 à 49 ans) sur les marchés locaux des communes de Koulikoro et de Ségou. Sur l'une des faces du feuillet faisant l'objet du test se trouvent des illustrations et des expressions simples décrivant la manière d'utiliser le Collier du Cycle, tandis que l'autre face ne comprend que des illustrations. À la suite des résultats de cette procédure de test, la brochure fut révisée et adaptée et fit l'objet d'un nouveau test (deux rondes supplémentaires) dans les deux mêmes régions du Mali avec un autre groupe de 100 personnes, qui avaient toutes au moins un niveau d'enseignement primaire. Le côté ne reprenant que les images fut éliminé, puisque les participants comprenaient mieux les messages lorsque les illustrations étaient accompagnées de brèves explications (le côté images + texte). Au cours de la quatrième ronde, grâce au concours de 52 participants, nous n'avons testé que deux encadrés du feuillet afin de confirmer la compréhension de deux concepts précis.

Au cours de la première ronde du test de la documentation, les participants masculins avaient une probabilité bien plus grande de n'avoir jamais fréquenté l'école dans la commune de Ségou par rapport à la commune de Koulikoro (test exact de Fisher, $p = 0,03$). Pour les deux régions, aucune différence significative n'a été relevée par rapport au niveau d'enseignement des femmes. Pour les autres rondes de la phase de test, et à cause d'une différence du niveau de compréhension entre les hommes et les femmes, les participants masculins et féminins qui ont été recrutés avaient au minimum un niveau d'enseignement primaire (voire plus haut) pour s'assurer qu'ils soient à même de lire et de comprendre la documentation. Bien que la plupart des informations sur le feuillet soient restées identiques, quelques légers changements y ont été apportés par rapport à des concepts que les participants n'avaient pas compris ou qui étaient traditionnellement difficiles à comprendre pour un utilisateur de la MJF. Par exemple, les réactions par rapport à l'encadré intitulé « Qui peut utiliser le Collier du Cycle ? » ont montré que celui-ci était mal compris, aussi bien par les hommes que par les femmes.

À la suite de ces résultats, les changements suivants ont été apportés :

- Accroissement de la taille de l'image montrant une femme remplissant les conditions requises pour utiliser la méthode, et de celle montrant un couple parlant de PF au lit.
- Ajout d'une image montrant des « gouttes de couleur rouge » sur le calendrier ainsi que d'une perle de couleur rouge (Figure 3) afin de clarifier les consignes pour l'utilisateur, à

savoir déplacer l'anneau sur la première perle rouge le premier jour des règles, et marquer le calendrier le premier jour du cycle menstruel.

- Ajout de la même image montrant les gouttes de couleur rouge pour mieux faire comprendre aux participants de l'étude l'importance du début du cycle menstruel avant que l'anneau en caoutchouc n'atteigne la perle de couleur marron foncé.
- Ajout de flèches pour montrer comment compter les jours depuis le premier jour du cycle menstruel à la fois sur le calendrier et sur le Collier du Cycle.
- Ajout d'une image montrant une consultation entre un prestataire et un client pour améliorer la mauvaise compréhension du concept consistant à savoir « quand revenir chez le prestataire », où l'on voit quatre flèches pointant vers quatre images de scénarios (des raisons possibles).

Les modifications aux critères de recrutement ont permis d'obtenir des améliorations durables dans les niveaux de compréhension lors des deuxième, troisième et quatrième rondes. Lors des tests de la deuxième ronde, la compréhension des participants masculins s'est améliorée pour tous les concepts illustrés sur le feuillet (sauf lorsqu'il s'agissait de comprendre que le Collier du Cycle est une méthode de PF), et était comparable au niveau de compréhension des femmes lors de la première ronde (figure 7). Concrètement, la compréhension s'est améliorée pour les concepts suivants :

- Que faire lors du premier jour, contrôle de la longueur du cycle.
- Que faire lorsque la femme oublie de déplacer l'anneau.
- Quand aller voir un prestataire.

Nos résultats ont montré que la relation entre les concepts « le Collier du Cycle représente le cycle menstruel » et « le Collier du Cycle est une méthode de PF » était mal comprise. Pour améliorer cette compréhension, nous avons ajouté une description du Collier du Cycle dans l'encadré « Qu'est-ce que le Collier du Cycle ? » - « Le Collier du Cycle est un collier représentant le cycle menstruel. Chaque perle représente un jour du cycle » (figure 8). S'il est vrai qu'entre la première et la deuxième ronde on a constaté que le niveau de compréhension a été multiplié par un facteur compris entre 6 et 15 par rapport à la question « quand retourner voir le prestataire », l'ajout d'une affiche montrant une croix rouge a permis de clarifier le concept selon lequel une consultation entre un prestataire et un client a lieu au centre de santé.

Si on les compare aux tests de la deuxième ronde, les résultats de la troisième ronde ont montré que le niveau de compréhension des participants à l'étude a été multiplié par un facteur compris entre 5 et 10 par rapport au concept « le Collier du Cycle représente le cycle menstruel » (figure 12). Les participants ont également été à même de retransmettre des renseignements quant à savoir « qui peut utiliser le Collier du Cycle », et ont précisé correctement aux enquêteurs les critères d'admissibilité à la MJF. Concrètement, 90% des hommes et des femmes ont compris que la MJF s'adresse aux femmes dont les règles surviennent une fois par mois. Environ trois quarts

des femmes et 62% des hommes ont compris que les couples qui dialoguent sans problème et qui acceptent de s'abstenir d'avoir des relations sexuelles ou d'utiliser un préservatif pendant les jours fertiles peuvent utiliser la méthode. Quant à savoir quand prendre contact avec un prestataire, le niveau de compréhension s'est amélioré pour les femmes au fur et à mesure des quatre rondes de test, mais il est resté identique ou a diminué pour les hommes.

Au cours de la quatrième ronde, l'équipe de l'étude a estimé que l'image des « gouttes de couleur rouge » utilisée pour indiquer le premier jour du cycle menstruel ne devrait pas être utilisée pour indiquer un concept différent et opposé, à savoir un cycle menstruel court (c'est-à-dire lorsque les règles surviennent avant d'atteindre la perle de couleur marron foncé). C'est pourquoi l'image des gouttes de couleur rouge a été remplacée par les termes « les règles ont commencé trop tôt ». Les messages étaient toujours suffisamment bien compris, la plupart des concepts ayant un niveau de compréhension de 81% et plus. Quant aux messages traitant des cycles longs et courts ainsi que la nécessité de prendre contact avec un prestataire, il fut décidé que des niveaux de compréhension des participants masculins légèrement inférieurs aux résultats souhaités (65 et 69%) seraient suffisants, étant donné l'importante augmentation du niveau de compréhension qui a été réalisée.

Au-delà, et bien que l'intention originale fût de mettre au point une documentation fondée sur des images (avec peu ou pas de mots) pour la population malienne au sens large, nos résultats montrent qu'il ne s'agit pas d'une stratégie efficace. Ces résultats ont des répercussions pour d'autres pays : la documentation intégrée doit avoir des images qui s'accompagnent d'un texte descriptif pour que les utilisateurs puissent comprendre par eux-mêmes comment utiliser le Collier du Cycle / la MJF. Par conséquent, à l'avenir, les démarches s'adressant directement aux consommateurs devraient cibler en particulier des groupes d'hommes et de femmes ayant au moins un niveau d'enseignement primaire (voire plus), puisqu'il est d'une importance cruciale que les utilisateurs soient en mesure de lire et de comprendre le texte expliquant la manière d'utiliser la MJF / le Collier du Cycle. La prochaine étape consistera à mettre au point la deuxième phase de l'étude et à mettre au point des activités de création de demande (comme par exemple des messages publicitaires sur les radios locales) ciblant les Maliens ayant des connaissances de base en lecture et en écriture. Ces messages parleront des avantages du Collier du Cycle et de la possibilité d'acheter celui-ci dans les magasins locaux ou boutiques. Dans le cadre de cette phase, nous étudierons l'intérêt suscité par le Collier du Cycle dans les boutiques, et nous suivrons les utilisateurs afin d'évaluer l'utilisation correcte de la méthode, grâce à une version révisée de la documentation insérée expliquant les consignes d'utilisation.

Offering the Standard Days Method (SDM) in Small Shops (“Boutiques”) in Rural Mali

1. Background/Rationale

In Mali, high fertility rates (6.6) are coupled with low contraceptive prevalence (6.9%), according to the 2006 Demographic Health Survey. Couples may not have access to health services or choose not to seek services due to cost and distance. Poor access and lack of availability of health services, contraceptive commodities and/or health providers can be a deterrent to use. In rural areas of Mali, where health facilities are far from many potential clients, providing family planning (FP) products which do not require health facilities or providers can play a potential significant role in increasing FP use. Small stores or “boutiques”, which provide families access to food and household supplies, can also be a source of contraceptives. Boutiques are more numerous than pharmacies and provide greater access to contraceptive commodities outside the clinic setting. This study examines the provision of CycleBeads® to communities through boutiques, a non-traditional service delivery setting. CycleBeads is a visual tool used with the fertility awareness-based FP method, Standard Days Method® (SDM). The first phase of this two-phase study entailed pilot-testing and revision of the instructional insert that accompanies CycleBeads and is the focus of this report. The purpose of Phase I was to revise the instructional insert on how to use SDM, so that women can understand and use the method without provider assistance. The revised insert will be sold as part of the CycleBeads package in boutiques following promotion of CycleBeads as a direct to consumer FP product in a subsequent phase of the study (Phase II).

The decision to develop a new insert to accompany CycleBeads for distribution in “boutiques” in Mali was made based on the premise that women/users who purchase CycleBeads directly from boutiques will receive little if any explanation on how to use SDM. It was crucial to develop a CycleBeads insert specifically for self-instruction by a potential SDM user. The premise of this work was based on previous experience in India (2006-2007) that showed that the development of a primarily pictorial insert can be feasible and successful in less developed settings. The pictorial insert used in India is a two sided document: one side uses only images to explain CycleBeads, and the second side has images from the pictorial side accompanied by supporting text. In 2007, a western African version of the pictorial insert was developed and underwent initial testing of messages and images. This version of the insert was used for the first of four rounds of insert testing. The overall poor understanding from the first round of testing of the pictorial insert, combined with results from testing a similar insert in Guatemala in 2009 that showed confusion, led the team to eliminate the pictorial-only side of the insert and to continue simplify and clarify the existing messages and images.

2. Methods

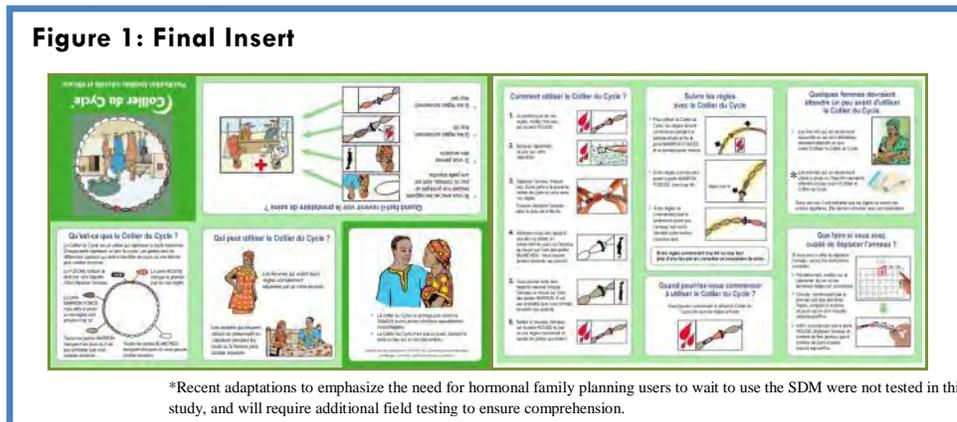
Currently, two CycleBeads inserts are used in Mali: 1) a low literacy version in French, and 2) a low literacy version in Bambara, a local Malian language. Lower literacy was defined as women

with basic reading skills equivalent to U.S. first or second grade levels. IRH and Population Services International (PSI)/Mali determined initially that a pictorial version of the insert was the most appropriate for use in the study due to extremely low levels of literacy among populations, particularly women, in rural areas. During Phase 1, we gained an understanding of the advantages and disadvantages of the insert messages by providing pictorial instructions to potential clients, which they used for self-instruction on how to correctly use CycleBeads. A team of two interviewers recruited 50 adults, (N = 25 men of any age, and N = 25 women, 15-49 years of age) randomly from men and women attending a local market in Koulikoro and Segou districts, for a total of 100 participants for the first round of insert testing. Each participant was given a set of CycleBeads with the insert, and was asked to look at the insert and familiarize him/herself with CycleBeads. After 15 minutes, an interviewer administered a questionnaire on key concepts pertaining to CycleBeads and SDM (i.e. significance of the brown beads, red bead, etc.), to see how well the study participant understood how to use CycleBeads. The participants were allowed to hold and refer to the insert throughout the interview. Participants were asked to answer questions after they read each panel (Panel, 2, 3, etc.) of the insert. The questionnaire followed the pictorial insert's images panel by panel to ensure 1) a clear flow of questioning and 2) quick identification by the interviewer of concepts which were not well understood. Demographic information including age, sex, residence, socioeconomic status (occupation, level of education), and parity was collected during the interview process. Following the first round of testing, the insert was revised, adapted, and re-tested (rounds two and three) with another group of 100 individuals, all of whom had at least primary level of education, in the same two areas of Mali.

In the second – fourth rounds of testing, the pictorial side of the insert was eliminated, as we discovered in round one that participants required the images with accompanying descriptive explanations (images + text side) to understand how to use CycleBeads/SDM. In the fourth round, we tested only two panels of the insert, to confirm comprehension of two concepts (i.e., the first day of the menstrual period and identification of menstrual cycles that are too short in length), with 52 participants (N = 26 women, 15-49 years of age; N = 26, men of any age), with at least primary level of education, as in earlier rounds of testing. For the study, primary level of education was categorized as the first nine years of schooling (first through ninth year). Secondary level of education was defined as three years of high school (10th to 12th year). Upon finishing high school, students earn a Baccalaureat Malian (BAC). Higher than secondary level education was defined as one year after a BAC to graduate level (master's degree, doctorate). IRH and PSI Mali carried out a total of four rounds of testing until adequate comprehension of the concepts presented in the insert was achieved (Figure 1. final insert).

3. Analyses of Results and Adaptations to Inserts

Data on participants' comprehension of key concepts contained in the insert was reviewed. A score of 14 correct responses out of 19 questions (75%) was defined as an adequate understanding of CycleBeads use. We defined a low level of comprehension of the insert as scores of 50% and lower. We based modifications to the insert on this 50% cutoff and whether concepts were understood according to participants. Interviewers took notes on why/how the participants did not understand certain concepts, and the insert was adapted accordingly. PSI-Mali and IRH-Mali collaborated on data collection, analyses and interpretation of results and revision of the insert with IRH/Washington.



4. Process and Results

4.1. Testing of Insert: Round 1

Process: All male and female study participants were recruited and interviewed by an interviewer of the same sex (one male interviewer, N = 25 men and one female interviewer, N = 25 women). The two-sided insert had 1) a pictorial side with images only and 2) a side with the same images and supporting text.

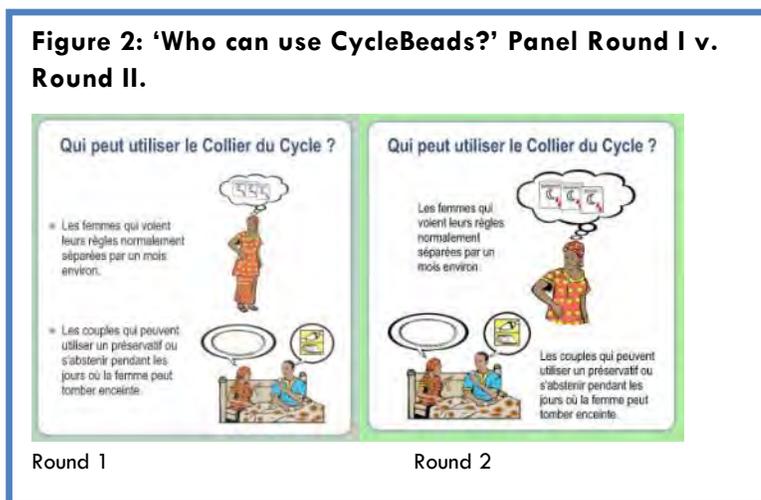
Results following Round 1 testing: The pictorial side of the insert was eliminated, as participants felt the insert with images and supporting text facilitated their comprehension of how to use CycleBeads. Participants relayed to interviewers that the pictorial side of the insert was “confusing” and they relied on the side of the insert with images + text.

Our analyses revealed large differences in comprehension of the insert by sex (Table 1), following the initial round of insert testing. Although most women understood the majority of concepts presented in the CycleBeads insert, men had low overall comprehension of the insert. These results can be explained, in part, by regional differences in educational level among male participants. Male participants were significantly more likely to have ‘never attended school’ in the district of Segou as compared to Koulikoro district (Fisher’s exact test, $p=0.03$). No significant differences were found among female participants that had “never attended school” and by ‘level

of education attained’ (primary, secondary, above secondary), by region. Due to differences in comprehension between men and women which may have been due, in part, to the lower educational level of male participants or issues during data collection/interviews, our findings were inconclusive. We decided to re-test the insert with participants with basic literacy skills in the second round of testing to confirm that educational level was a critical component to understanding the insert. Following the initial testing, we restricted our changes to the insert based on 1) concepts that have been traditionally difficult to understand for CycleBeads/SDM users, as well as 2) concepts identified in the first round of testing as poorly understood by both men and women.

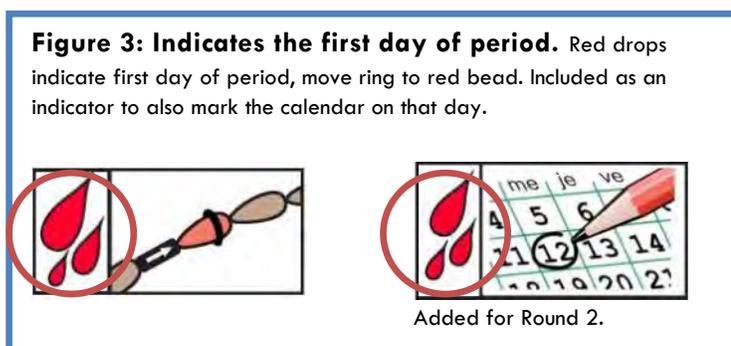
4.1.1. Who can use CycleBeads: eligibility

Most women and men understood that CycleBeads was a FP method or responded CycleBeads/necklace method in response to the question “What are these?” (Table 1). However, responses to the panel titled “Who Can Use CycleBeads” showed low comprehension of this panel by both men and women (Table 1). As a result of these findings, we rearranged the text in order to increase the size of the images of an eligible woman and a couple discussing FP in bed (Figure 2).



4.1.2. What to do the first day of a woman’s menstrual period: move ring to red bead

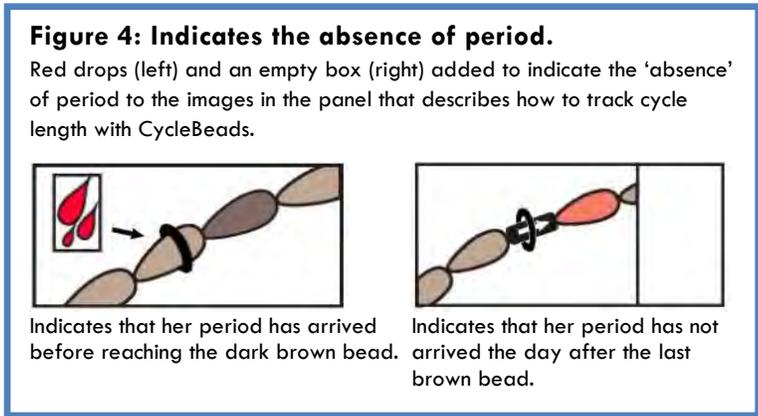
Most women (74%) and less than half of men (38%) correctly responded that a SDM user should move the ring to the red bead on the first day of a woman’s menstrual period when asked “What should you do the first day when using CycleBeads?” (Table 1). Few men (12%) and about one-third of women responded to also mark the first day of the period on the calendar. Interviewees indicated participants were confused as to the purpose of the calendar depicted in the insert. To clarify and reinforce the significance of the first day of the menstrual period and associated actions, we added an image of “red drops” to the left of the calendar image and to the left of the image of the rubber ring placed on the red bead on the first day of the period (Figure 3). The red drops had previously been tested and used in many materials to represent the first day of the period. We felt the addition of the “red



drops” image to the calendar in Round 2 (Figure 3), clarified the instruction to the user to move the ring to the first red bead on the first day of the menstrual period and it also facilitated the connection between marking the calendar on the first day of a woman’s menstrual period and moving the ring to the red bead.

4.1.3. Tracking cycle length: using CycleBeads to monitor cycle length

A critical element of SDM use is the ability of women and/or couples to continue to monitor cycle length, and thus ensure the woman remains eligible to use the SDM provided she has cycles of 26-32 day duration. Nearly half of women and few men understood the concept of tracking a woman’s



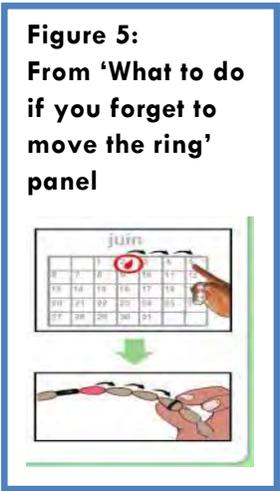
cycle length to make certain her cycle is 26-32 days long (i.e. her period arrives about the same time, every month) as an eligibility criterion for SDM use (Table 1). The significance of short and long menstrual cycles were explained in the insert as: 1) if a woman has her menstrual period before reaching the dark brown bead (which marks the 27th day), her cycle may be too short to use

SDM (i.e. her cycle is less than 26 days); and 2) if she comes back to the red bead (the day after the last brown bead) and has not started her period, and her cycle maybe too long to use this method (i.e. her cycle is longer than 32 days).

Therefore, in order to increase study participants’ comprehension of the significance of the onset of a woman’s menstrual period before the rubber ring reaches the dark brown bead, in relation to her cycle length, we added the same “red drops” image shown in Figure 3 above (Figure 4). In contrast, we added an “empty box” representing the absence of a period, to indicate that a woman’s menstrual period had not returned next to the image of the rubber ring between the last brown bead and the first red bead (Figure 4). The “empty box” was previously tested with other images including outlined drops or drops crossed out with an “X”. The empty box was shown to be most understood by SDM users and was utilized in this insert.

4.1.4. What to do if one forgets to move the ring

About half of women and one-quarter of men understood the notion of what to do when a woman/couple forgets to move the ring (Table 1). To improve the understanding of this concept, we increased the size of the arrows counting the days on the calendar. The arrows demonstrate how to count the days that have passed since the first day of the menstrual period (Figure 5). These arrows further emphasize that a SDM user must count the same number of days, as each day is equivalent to each bead, on CycleBeads as well to know where to put the rubber ring. A large



arrow placed in between the two images indicate the order in which an SDM user can *first* 1) count the days on the calendar, *and then* 2) count the same number of beads on the CycleBeads.

4.1.5. When a SDM user should visit a provider

We found low levels of comprehension (range of 4-10%) for reasons why a SDM user would visit a provider (Table 1). About 35% of women understood the consequence of unprotected sex on a white bead day and recognized the need to see a provider. Only about 4-10% of men and women understood the implication of seeing a health provider if she sees her menstrual period before reaching the dark brown bead or if she reaches the red bead and has not seen her menstrual period. As a result of poor comprehension of these concepts, we added an image from the pictorial side of the insert to strengthen comprehension of reasons why a SDM user would see a provider. This addition entailed including four arrows pointing from the four scenario images (images + text side of the insert) to the provider-client consultation image, which was also added for the subsequent round of testing (Figure 6).

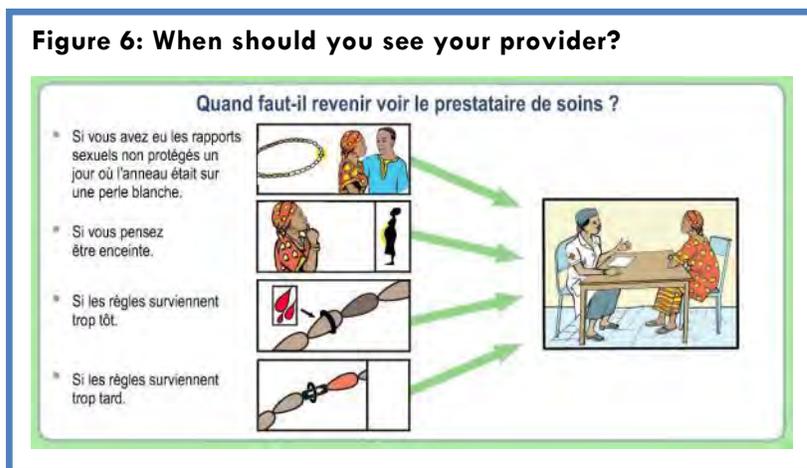


Table 1. Percentage of Malian women and men who correctly understood concepts presented in the CycleBeads insert, following reading the insert without explanation from a provider, Round 1

Question	%Women (N=50)	% Men (N=50)
Q1a: What are these?		
• This represents the menstrual cycle	4	0
• CycleBeads (Necklace Method)	58	22
• Family Planning Method	86	76
Q1b: Why would you use this?		
• To prevent a pregnancy	38	98
Q1c: What does the arrow mean?		
• It indicates in what direction to move the ring	94	18
Q1d: What does each bead represent?		
• One day of the menstrual cycle	82	48
Q1e: What does the red bead mean?		
• First day you see your period	84	34
Q1f: What do the brown beads mean?		
• Days on which it is not likely to become pregnant	94	12
Q1g: What do the white beads mean?		
• Days where pregnancy is possible	92	24
Q1h: What does the dark brown bead mean?		

<ul style="list-style-type: none"> If the period returns before putting the ring on the dark brown bead, the cycle is too short to use SDM; the cycle is less than 26 days. 	72	6
Q1i: What does the last brown bead tell you?		
<ul style="list-style-type: none"> If the period does not start day after the last brown bead the cycle is too long to use SDM. It was longer than 32 days. 	70	4
Q1j: Who can use CycleBeads?		
<ul style="list-style-type: none"> Women who have their menstrual period every month at the predicted time 	36	6
<ul style="list-style-type: none"> Women who communicate well with their husband/partner and who accept to abstain or use a condom on days when pregnancy is possible 	2	4
<ul style="list-style-type: none"> Women are not using other contraceptive methods and have not used them recently (i.e. recent use of hormonal methods). 	6	2
Q1k: What do you do with the ring?		
<ul style="list-style-type: none"> You move the ring each day, from one bead to the next in the direction of the arrow. 	80	44
Q1l: What do you do the first day using the CycleBeads?		
<ul style="list-style-type: none"> On the first day of the period, put the ring on the red bead 	74	38
<ul style="list-style-type: none"> Mark that day on the calendar 	30	12
Q1m: What should you do each day?		
<ul style="list-style-type: none"> Move the ring one bead each day in the direction of the arrow 	76	38
Q1n: What should you do if the next cycle starts before the dark brown bead?		
<ul style="list-style-type: none"> See FP Provider because method won't work as cycles are too short 	52	14
Q1o: What should you do if the next cycle does not start before arriving at the arrow again?		
<ul style="list-style-type: none"> See a FP provider because the method will not work for you due to long cycles 	52	16
Q1p: What should you do if the next cycle begins after the dark brown bead and before arriving to the arrow again?		
<ul style="list-style-type: none"> Jump the remaining brown beads and place the ring on the red bead to start a new cycle 	16	4
Q1q: What should you do if you forget to move the ring?		
<ul style="list-style-type: none"> Look on the calendar, where you marked the first day of your cycle. From there count the number of days that have passed including today and move the ring the same number of spots from the red bead. 	48	24
Q1r: When should you see a FP provider?		
<ul style="list-style-type: none"> If you have unprotected sex on a white bead day 	35	18
<ul style="list-style-type: none"> If the next cycle starts before the dark brown bead 	10	4
<ul style="list-style-type: none"> If the next cycle does not start before arriving to the arrow again (the last brown bead) 	4	4
Q1s: Why is it important to discuss this method with your partner?		
<ul style="list-style-type: none"> Because it is the responsibility of the man and the women to ensure that they can use a condom or abstain on the days when pregnancy is possible 	44	14

4.2. Testing of Insert: Round 2

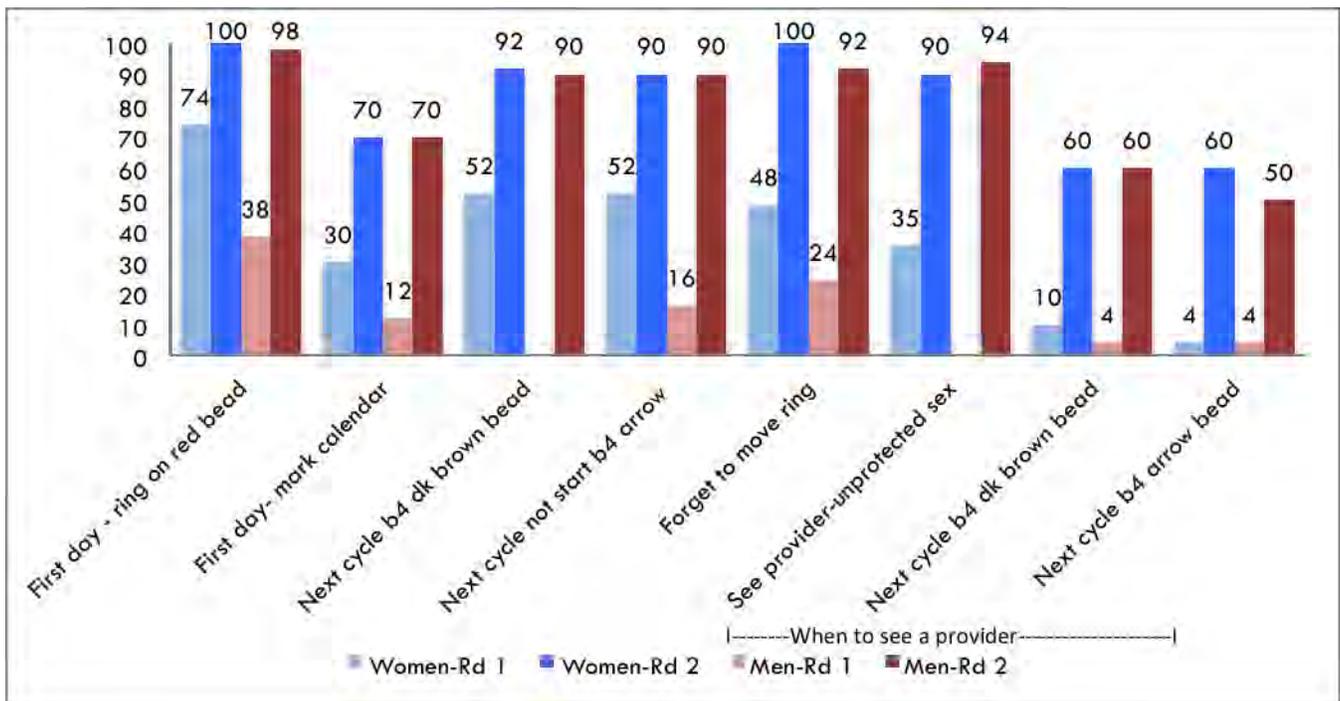
Process: Two male and two female interviewers carried out all male and female interviews, respectively, to avoid possible interviewer bias with only one same-sex interviewer. For Round 2 testing, we recruited only men and women with at least some primary school education, secondary level education, or higher, given the decision to target this segment for direct-to-consumer approaches. Participants were given only one side of the insert with the descriptive

wording accompanying the images. The pictorial side was found to be confusing and not useful for participants and was eliminated from Round 2 testing. We also asked participants to provide suggestions on how to improve the insert, if certain concepts were not clear or not well understood.

Results: Enrolling participants with higher levels of education contributed, in part, to overall improved comprehension on nearly all concepts (Table 2). The changes were substantial. Therefore, we decided to confirm these findings repeating the same procedure of recruiting only male and female participants with at least some primary level of education in Round 3, and examine if comprehension scores decreased in Round 3 in comparison to Round 2. Suggestions from Round 2 study participants were not helpful in refining the insert, as most provided responses of “I don’t know” or “I don’t have an idea.”

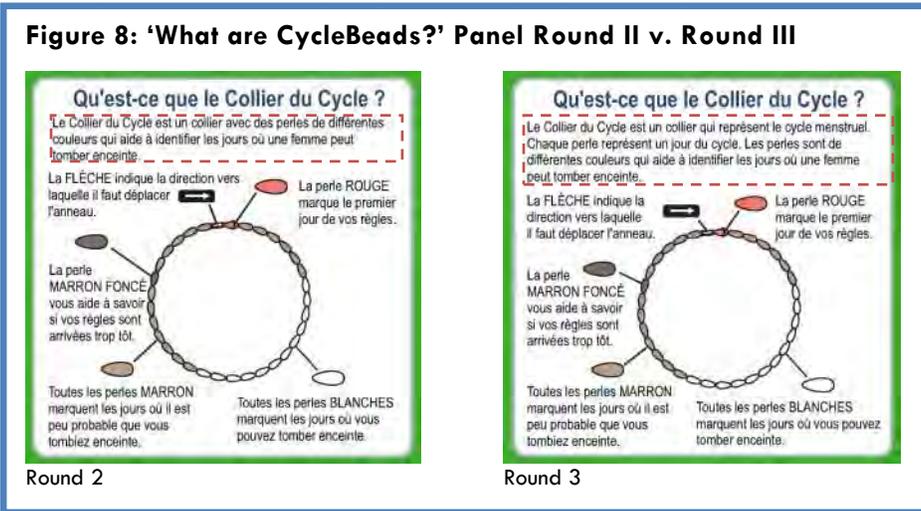
Comprehension of male participants improved for all concepts illustrated in the insert, except recognition of CycleBeads as a FP method, and was comparable to women’s level of comprehension in Round 2 versus Round 1 (Figure7). Specifically, there was a 3-15 fold increase in comprehension of the following concepts: what to do on the first day, monitoring cycle length, what to do when a woman forgets to move the ring, and when to see a provider was found (Table 2 and Figure 7). The figure below demonstrates improved comprehension between Round 1 and Round 2:

Figure 7 Comprehension of concepts of CycleBeads insert, a comparison between Round 1 and Round 2 insert testing.



4.2.1. What CycleBeads represent: family planning method and menstrual cycle

Neither men nor women understood that CycleBeads/necklace represent the menstrual cycle, although understanding improved slightly in comparison to the first round of testing (Figure 7).

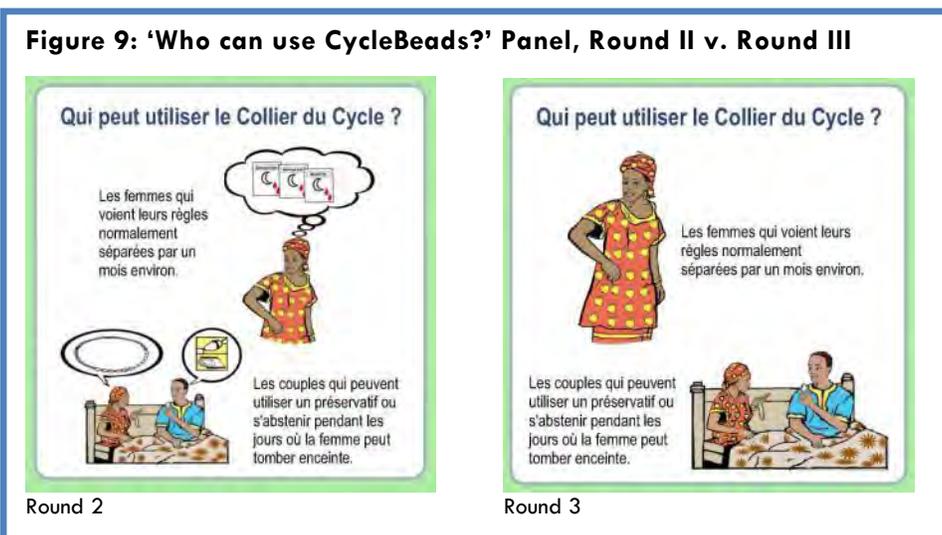


The percentage of men and women who understood that CycleBeads is a FP method dropped by nearly half in comparison to Round 1, as 42% of men and women understood CycleBeads is a FP method. Our findings revealed that the linkages between the concepts “CycleBeads represent the menstrual cycle” and “CycleBeads is a FP method” were not clearly presented in the insert, as participants did not understand these ideas. To improve level of comprehension, we added to a description of CycleBeads to the “What is CycleBeads” panel - “CycleBeads is a necklace that represents the menstrual cycle. Each bead represents one day of the cycle.” (Figure 8)

Understanding of the concept that, “women who see their periods every month at the expected time” improved from 6% and 36% for men and women, respectively, to 84% for both male and female participants from the first to the second round (Table 2). Although there was a marked improvement in understanding the importance of couple communication and how to manage the fertile days of the cycle (“Women who communicate well with their husband/partner and who accepts to abstain or use a condom on days where pregnancy is possible”) from the first round to the second round, (first round - 4% of men, second round - 40% of men, first round - 2% of women, second round - 48% of women), results were still less than the desired (cutoff of 50%, considered low comprehension). The data clearly demonstrated that the majority of men and women perceived (incorrectly) that women

4.2.2. How to screen for eligibility to use SDM: who can use CycleBeads

Understanding of the concept that, “women who see their periods every month at the expected time” improved from 6% and 36% for men and women, respectively, to 84% for both male and female participants from the first to the second round (Table 2). Although there was a marked improvement in understanding the importance of couple communication and how to manage the fertile days of the cycle (“Women who communicate well with their husband/partner and who accepts to abstain or use a condom on days where pregnancy is possible”) from the first round to the second round, (first round - 4% of men, second round - 40% of men, first round - 2% of women, second round - 48% of women), results were still less than the desired (cutoff of 50%, considered low comprehension). The data clearly demonstrated that the majority of men and women perceived (incorrectly) that women



from the first round to the second round, (first round - 4% of men, second round - 40% of men, first round - 2% of women, second round - 48% of women), results were still less than the desired (cutoff of 50%, considered low comprehension). The data clearly demonstrated that the majority of men and women perceived (incorrectly) that women

who do not use other contraceptives and/or have not used them recently are not eligible to use SDM, with slight improvements in comprehension from the first to the second round of testing (Table 1, Table 2).

To address both of these issues regarding comprehension of key aspects of SDM eligibility, the study team, considering feedback from interviewees, decided to remove the “talking bubbles” from the “Who can use CycleBeads?” panel from Round 2 testing and increase the size of the images of an eligible woman and a couple in bed discussing the SDM in Round 3 (Figure 9). In the following panel “Some women may need to wait before using CycleBeads”, the image used to show “other methods” in Round 2 was updated to include a clearer image of hormonal FP methods, which also included an injectable, as well as an intrauterine device (IUD) and a packet of oral contraceptives (Figure 10).

4.2.3. When to see a provider: who can use Cyclebeads

From Round 1 to Round 2 testing, there was a 6-15 fold increase, in comprehension of “when to return to the provider.” In order to sustain this improvement and increase understanding among those (40%) who did not understand these ideas, interviewers suggested the addition of a “red cross” poster to the wall behind the provider and client consultation (Figure 10.) We felt this adaptation could clarify that the consultation is taking place at a health center and help facilitate understanding of when/under which circumstances a SDM user should visit a health care provider.

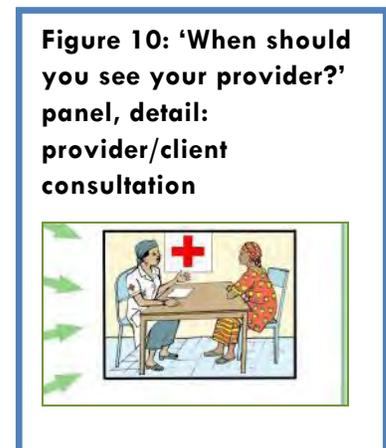


Table 2. Percentage of Malian women and men who correctly understood concepts presented in the CycleBeads insert, following reading the insert without explanation from a provider, Round 2

Question	%Women (N=50)	% Men (N=50)
Q1a: What are these?		
• <i>This represents the menstrual cycle</i>	10	20
• <i>CycleBeads (Necklace Method)</i>	84	44
• <i>Family Planning Method</i>	42	42
Q1b: Why would you use this?		
• <i>To prevent a pregnancy</i>	64	100
Q1c: What does the arrow mean?		
• <i>It indicates in what direction to move the ring</i>	100	98
Q1d: What does each bead represent?		
• <i>One day of the menstrual cycle</i>	98	100
Q1e: What does the red bead mean?		
• <i>First day you see your period</i>	100	100
Q1f: What do the brown beads mean?		
• <i>Days on which it is not likely to become pregnant</i>	100	86
Q1g: What do the white beads mean?		
• <i>Days where pregnancy is possible</i>	100	94
Q1h: What does the dark brown bead mean?		
• <i>If the period returns before putting the ring on the dark brown bead, the cycle is too short to use SDM; the cycle is less than 26 days.</i>	88	82
Q1i: What does the last brown bead tell you?		
• <i>If the period does not start day after the last brown bead the cycle is too long to use SDM. It was longer than 32 days.</i>	86	52
Q1j: Who can use CycleBeads?		
• <i>Women who have their menstrual period every month at the predicted time</i>	86	84
• <i>Women who communicate well with their husband/partner and who accept to abstain or use a condom on days when pregnancy is possible</i>	48	40
• <i>Women are not using other contraceptive methods and have not used a method recently (i.e. recent use of hormonal methods).</i>	4	16
Q1k: What do you do with the ring?		
• <i>You move the ring each day, from one bead to the next in the direction of the arrow.</i>	100	98
Q1l: What do you do the first day using the CycleBeads?		
• <i>On the first day of the period, put the ring on the red bead</i>	100	98
• <i>Mark that day on the calendar</i>	70	70
Q1m: What should you do each day?		
• <i>Move the ring one bead each day in the direction of the arrow</i>	100	98
Q1n: What should you do if the next cycle starts before the dark brown bead?		
• <i>See FP Provider because method won't work as cycles are too short</i>	92	90
Q1o: What should you do if the next cycle does not start before arriving at the arrow again?		

<ul style="list-style-type: none"> • See a FP provider because the method will not work for you due to long cycles 	90	90
Q1p: What should you do if the next cycle begins after the dark brown bead and before arriving to the arrow again?		
<ul style="list-style-type: none"> • Jump the remaining brown beads and place the ring on the red bead to start a new cycle 	92	64
Q1q: What should you do if you forget to move the ring?		
<ul style="list-style-type: none"> • Look on the calendar, where you marked the first day of your cycle. From there count the number of days that have passed including today and move the ring the same number of spots from the red bead. 	100	92
Q1r: When should you see a FP provider?		
<ul style="list-style-type: none"> • If you have unprotected sex on a white bead day 	90	94
<ul style="list-style-type: none"> • If the next cycle starts before the dark brown bead 	60	60
<ul style="list-style-type: none"> • If the next cycle does not start before arriving to the arrow again (the last brown bead) 	60	50
Q1s: Why is it important to discuss this method with your partner?		
<ul style="list-style-type: none"> • Because it is the responsibility of the man and the women to ensure that they can use a condom or abstain on the days when pregnancy is possible 	96	88

4.3. Testing of Insert: Round 3

Round 2 results identified concepts that were difficult for participants to understand. Some questions in the Round 3 instrument were adjusted slightly to improve comprehension. Round 3 findings revealed substantial improvement in identified problem areas of SDM eligibility and when to see a provider (Table 3). Selection criteria for men and women interviewed remained the same as in Round 2.

In comparison to Round 2 testing, Round 3 findings reveal a 5 -10-fold increase in study participants' understanding of the concept "CycleBeads represent the menstrual cycle." (Figure 11) Participants also were able to relay information on "who can use CycleBeads" and correctly specify SDM eligibility criteria to interviewers. Specifically, 90-100% and 62-74% of men and women understood that SDM is for women with menstrual periods that come about once a month and for couples who communicate with each other well and are able to abstain or use a condom on fertile days, respectively. In Round 3, most women were able to comprehend the notion of SDM ineligibility for women that have recently gave birth or are breastfeeding. Most women understand that women who had recently used another hormonal FP method may need to wait to use CycleBeads. Comprehension of "when one should see a FP provider" showed improvement regarding possible reasons why a SDM user should see her health care provider, yet men's level of comprehension was either lower or remained at the same level as Round 2 (Figure 11). Respondents may not have been prompted by interviewers to continue with their responses, once one correct answer was given, according to interviewers. However, all female and nearly all male participants were able to grasp the critical concept of menstrual cycles that are too short or too long in length.

Figure 11. Comprehension of CycleBeads insert concepts, a comparison between Round 2 and Round 3 insert testing.

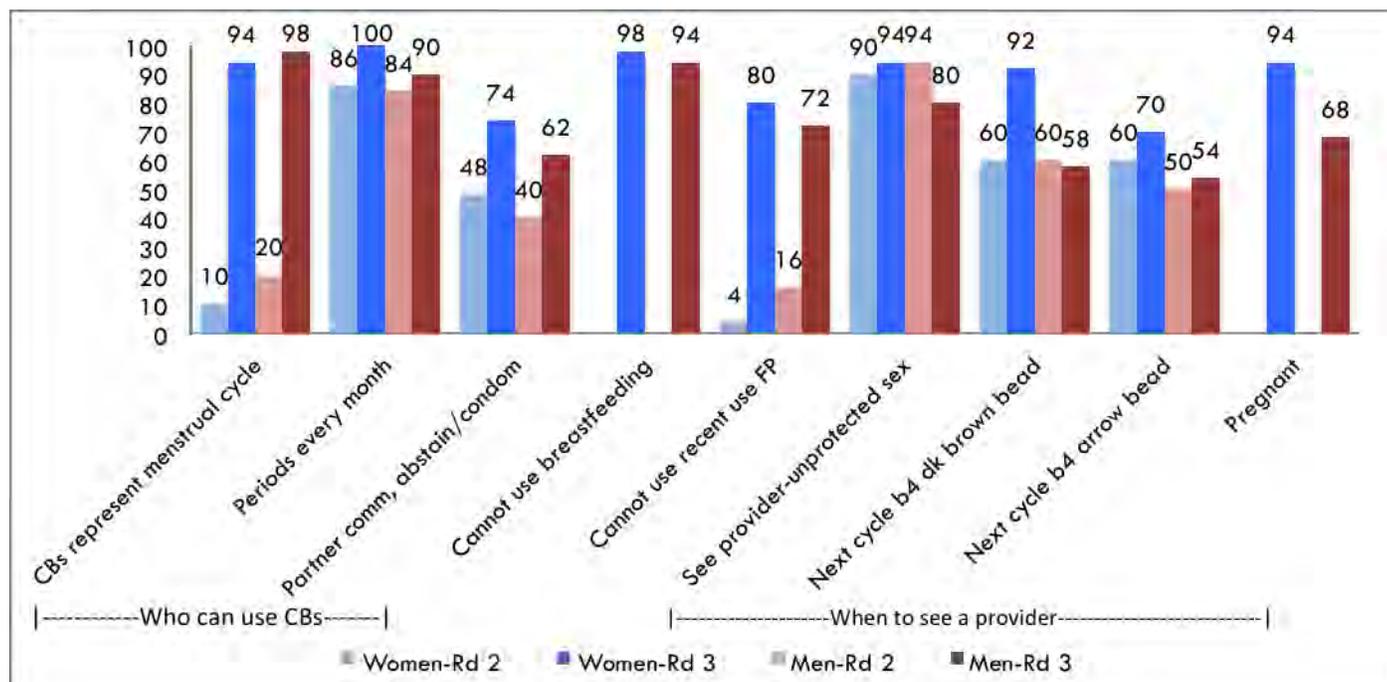


Table 3. Percentage of Malian women and men who correctly understood concepts presented in the CycleBeads insert, following reading the insert without explanation from a provider, Round 3

Question	% Women (N=50)	% Men (N=50)
Q1a: What does the necklace represent?*		
• This represents the menstrual cycle	94	98
Q1b: What does each bead represent?***		
• One day of the menstrual cycle	100	96
Q1c: What would you use this for?*		
• To prevent a pregnancy	82	88
Q1d: What does the arrow mean?		
• It indicates in what direction to move the ring	100	96
Q1e: What does the red bead mean?		
• First day you see your period	100	94
Q1f: What do the brown beads mean?		
• Days on which it is not likely to become pregnant	100	90
Q1g: What do the white beads mean?		
• Days where pregnancy is possible	100	94
Q1h: What does the dark brown bead mean?		
• If the period returns before putting the ring on the dark brown bead, the cycle is less than 26 days.	100	90
Q1i: If you period has not started after the last brown bead, what should you do?*		
• Your cycle is too long to use the method. It is longer than 32 days.*	56	40

• <i>Your cycle comes too late to use the method.**</i>	12	6
• <i>See a family planning provider.**</i>	74	58
Q1j: Who can use CycleBeads?		
• <i>Women see their period every month at the predicted time</i>	100	90
• <i>Women who communicate with their husband/partner and who abstain or use a condom on days when pregnancy is likely</i>	74	62
Q1k: Who CANNOT use the method?***		
• <i>Women who have recently given birth or are breastfeeding**</i>	98	94
• <i>Women who recently used another method of contraception (i.e. recent use of hormonal methods).*</i>	80	72
Q1l: What do you do with the ring?		
• <i>You move the ring each day, from one bead to the next in the direction of the arrow.</i>	100	98

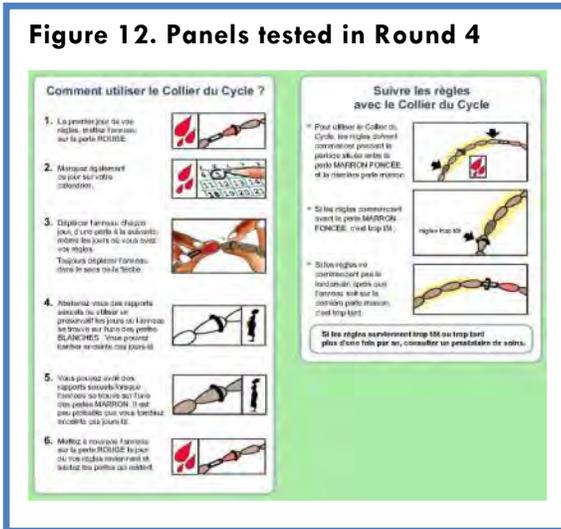
Q1m: What do you do the first day using the CycleBeads?		
• <i>On the first day of the period, put the ring on the red bead</i>	100	98
• <i>Mark that day on the calendar</i>	90	88
Q1n: What should you do each day?		
• <i>Move the ring one bead each day in the direction of the arrow</i>	100	98
Q1o: What should you do if the next cycle starts before the dark brown bead?		
• <i>See FP Provider because method won't work as cycles are too short</i>	100	68
Q1p: What should you do if the next cycle does not start before arriving at the arrow again?		
• <i>See a FP provider because the method will not work for you due to long cycles</i>	100	88
Q1q: What should you do if the next cycle begins after the dark brown bead and before arriving to the arrow again?		
• <i>Jump the remaining brown beads and place the ring on the red bead to start a new cycle</i>	100	88
Q1r: When can you start using the method?***		
• <i>First day of your period</i>	100	98
Q1s: What should you do if you forget to move the ring?		
• <i>Look on the calendar, where you marked the first day of your cycle. From there count the number of days that have passed including today and move the ring the same number of spots from the red bead.</i>	100	90
Q1t: When should you see a FP provider?		
• <i>If you have unprotected sex on a white bead day</i>	94	80
• <i>If you think you might be pregnant***</i>	94	68
• <i>If the next cycle starts before the dark brown bead</i>	62	58
• <i>If the next cycle does not start before arriving to the arrow again (the last brown bead)</i>	70	54
Q1u: Why is it important to discuss this method with your partner?		
• <i>Because it is the responsibility of the man and the women to ensure that they can use a condom or abstain on the days when pregnancy is possible</i>	94	48

*Indicates questions that have been adapted for Round 3

** Indicates questions that were added to Round 3

4.4. Testing of Insert: Round 4

Process: In the final round, we tested only two panels of the insert (“How to Use CycleBeads” and “Track Your Cycles with CycleBeads”) to verify the comprehension of two concepts, which remained difficult to understand: 1) red drops indicate the first day of the menstrual period and 2) identification of a menstrual cycle that is too short in length (Figure 12).



Results: Following analysis of adaptations made during the third round of testing, the study team felt that the same “red drops” image used to indicate the first day of the menstrual period should not be used to indicate a different and contrasting concept of a short menstrual cycle (i.e. when a woman’s period arrives before reaching the dark brown bead). While the team was satisfied with the overall understanding of the insert, this required testing to ensure study participants could correctly comprehend the message conveyed in the

panel, without confusing the meaning behind these two different concepts. A change was made to the “Track Your Cycles with CycleBeads” panel in which the red drops image was replaced with the words “period too soon.”

Table 4. Percentage of Malian women and men that correctly understood concepts presented in the two panels of the CycleBeads insert, following reading the insert without explanation from a provider, Round 4

Question	%Women (N=50)	% Men (N=50)
Q1aA: What do you do with the rubber ring?		
<ul style="list-style-type: none"> One advances the ring each day, one bead at a time in the direction of the arrow 	100	100
Q1bB: What do you do the first day of using the method?		
<ul style="list-style-type: none"> The first day of the period put the ring on the red bead Mark the date on the calendar also 	100 86	100 81
Q1cC: What should you do every day?		
<ul style="list-style-type: none"> Move the ring one bead in the direction of the arrow 	100	100
QdD: What should you do if the next cycle starts after the dark brown bead and before arriving at the arrow again?		
<ul style="list-style-type: none"> Jump the rest of the brown beads and put the ring on the red bead to start a new cycle. 	100	85
Q1eE: What should you do if the next cycle starts before the dark brown bead?		
<ul style="list-style-type: none"> See a family planning provider because the method will not work for you due to short cycles (less than 26 days) 	100	65
Q1fF: What should you do if the next cycle does not start before arriving at the arrow again?		
<ul style="list-style-type: none"> See a FP provider because the method will not work for you due to long cycles (more than 32 days) 	100	69

The results in Round 4 indicated that small changes made to the insert did not affect the level of comprehension. Messages were still well-understood (most concepts were 81% and above). For messages identifying long and short cycles and the need to see a provider, it was decided that slightly lower than desired levels of male comprehension (65 and 69%) for both concepts was sufficient, given the large increase in comprehension that was achieved over the insert testing period.

5. Conclusion

The process of testing a specific CycleBeads insert for self-instruction was informative in several ways.

The testing process identified adjustments to images and text that clarified concepts on SDM use that were often traditionally difficult for SDM users to understand, such as marking the first day of the menstrual period on a calendar and moving the ring to the red bead, knowledge of SDM eligibility criteria (i.e. women see period once a month, couples accept to abstain or use a condom during fertile times of the cycle) and when a woman should return to a health facility to see a provider.

Although it was envisioned that a direct-to-consumer insert would be pictorial-only (without text), study participants found the pictorial side of the insert confusing and did not understand the concepts presented. In the first round of testing, brief text descriptions accompanying images in the insert were found to be critical to participants' comprehension. Therefore, the pictorial side of the insert was eliminated in all subsequent rounds.

The testing process revealed that SDM direct-to-consumer initiatives should be focused on men and women with basic literacy skills, given women and men must be able to read and understand the text that accompanied images describing how to use SDM. In the first round of testing, our findings revealed that men who read the CycleBeads insert without any verbal explanation of the method did not understand the method well, in comparison to female participants. Further analysis suggested this might be due to significant differences in level of education between men and women interviewed. Interviewers also suggested that poor comprehension may be due to lack of interest, as some men consider FP a women's issue and may have not been fully engaged in responding to questions during the interview. Women tended to show greater interest and asked interviewers clarifying questions during interviews, as would be expected of potential users of the method. Due to varying levels of comprehension following Round 1 testing, male and female participants were recruited with at least primary level of education or higher in the remaining rounds of testing, to ensure their ability to read and understand the insert.

Changes to recruitment criteria resulted in sustained improvements in levels of comprehension in Rounds 2, 3 and 4. In Round 2, male comprehension improved, for the most part, to a similar level as female comprehension of the insert. Specifically, a 3-15 fold increase in comprehension of the following concepts: what to do on the first day, monitoring cycle length, what to do when a woman forgets to move the ring, and when to see a provider was found (Table 2 and Figure 7).

Improvements in knowledge of eligibility criteria were also found, particularly for the concept that women see their periods once a month (84%), though less so for couple communication and acceptance by couples to abstain or use a condom (40 % men, 48% women). The data clearly demonstrated that the majority of men and women incorrectly perceived that women that do not use other contraceptives and/or have not used them recently are not eligible to use SDM, with only slight improvements in comprehension from the first to the second round of testing (Table 1, Table 2). Modifications to images on eligibility criteria and when a woman should see a provider were made to clarify these concepts.

We found increased levels of comprehension for eligibility criteria following Round 3 testing, and levels of comprehension remained high for all other concepts, largely due to recruitment of men and women with the primary level of education or higher. Specifically, 90-100% and 62-74% of men and women understood that SDM is for women with menstrual periods that come about once a month and for couples that communicate with each other well and accept to abstain or use a condom on fertile days, respectively. Women understood when to see a FP provider and showed improvements in this area, though men attained the same or lower level of understanding. Participants were able to recognize the need to see a health provider when they identified their menstrual cycle length as too short or too long to use the method. Based on these findings, further adjustments to these concepts were not deemed necessary.

Finally, the testing process revealed that the same image (i.e. the “red drops” image) should not be used to indicate a different and contrasting concept (i.e. short menstrual cycle - when a woman’s period arrives before reaching the dark brown bead) in the fourth round of testing. Sufficiently high levels comprehension (most concepts were 81% and above) were achieved with a small change replacing the image with text. For other messages identifying long and short cycles and the need to see a provider, slightly lower than desired levels of male comprehension (65 and 69%) for both concepts was sufficient, given the large increase in comprehension that was achieved over the insert testing period.

Moving forward, although the original intent was to develop a pictorial-based insert (with minimal to no wording) for the general Malian population, our results indicate this is not an effective approach. These findings have implications for other countries, as the instructional insert must have images accompanied by descriptive wording, in order for users to instruct themselves how to use the CycleBeads/SDM. Therefore, in the future, direct-to-consumer approaches should be specifically targeted to a niche of men and women with at least some primary level of education or

higher, as it is critical that users are able to read and understand the text used to explain how to use the SDM/CycleBeads.

The next step will be to design Phase II of the study and generate demand creation activities (i.e. local radio spots) targeted to Malians with basic literacy skills. These spots will advertise the benefits and availability of CycleBeads for purchase in local stores or boutiques. In this phase, we will study the uptake of CycleBeads through boutiques and follow users to ascertain correct use of the method, with the revised instructional insert.

Appendices

Appendix A: Insert Round 1



Collier du Cycle
Planification familiale naturelle et efficace

Qu'est-ce que le Collier du Cycle ?

Le Collier du Cycle est un collier avec deux perles de différentes couleurs ou afin à identifier les jours où une femme peut tomber enceinte.

La FLECHE indique la direction vers laquelle il faut déplacer la perle.

La perle MAIRON FORTÉ vous aide à savoir si vos règles sont arrivées trop tôt.

Toutes les perles MAIRON FORTÉ respectent les jours où il est peu probable que vous tombiez enceinte.

Toutes les perles BLANCHES respectent les jours où il est possible d'être enceinte.

Qui peut utiliser le Collier du Cycle ?

- Les femmes qui veulent leurs règles commencer toujours par un mois entier.
- Les femmes qui veulent utiliser un préservatif ou s'abstenir pendant les jours où la femme peut tomber enceinte.

Comment utiliser le Collier du Cycle ?

- Le premier jour de vos règles, mettez l'anneau sur la perle ROUGE.
- Mélanges également le jour de votre ovulation.
- Déplacez l'anneau chaque jour d'un cran à la suite, même les jours où vous avez vos règles. Trouvez l'anneau l'anneau dans le sens de la flèche.
- Arrêtez-vous deux jours après avoir utilisé un préservatif ou abstenu de l'acte sexuel pendant sept jours consécutifs.
- Vous pouvez aussi faire rapport sexuel lorsque l'anneau est sur la perle MAIRON FORTÉ. Vous pouvez tomber enceinte pendant ces jours-là.
- Mettez à nouveau l'anneau sur la perle ROUGE le jour où vos règles recommencent et suivez les autres jours qui suivent.

Suivre les règles avec le Collier du Cycle

- Pour utiliser le Collier du Cycle, les règles doivent commencer pendant la période blanche entre la perle MAIRON FORTÉ et la perle blanche.
- Si les règles commencent avant la perle MAIRON FORTÉ, c'est trop tôt.
- Si les règles ne commencent pas le lendemain après que l'anneau est sur la dernière perle blanche, c'est trop tard.

Si les règles surviennent trop tôt ou trop tard plus d'une fois par an, consultez un prestataire de soins.

Que faire si vous avez oublié de déplacer l'anneau ?

Si vous avez oublié de déplacer l'anneau, vérifiez sur le calendrier le jour où les dernières règles ont commencé.

Ensuite, commencez par le premier jour des dernières règles, comptez le nombre de jours que vous devez aller jusqu'à aujourd'hui.

Enfin, commencez par la perle ROUGE, déplacez l'anneau le nombre de jours qu'il y a eu de jours écoulés jusqu'à aujourd'hui.

Quand faut-il revenir voir le prestataire de soins ?

- Si vous avez eu les rapports sexuels non protégés un jour où l'anneau était sur une perle blanche.
- Si vous pensez être enceinte.
- Si les règles surviennent trop tôt.
- Si les règles surviennent trop tard.

Quand pourriez-vous commencer à utiliser le Collier du Cycle ?

Vous pouvez commencer à utiliser le Collier du Cycle dès que les règles arrivent.

Le Collier du Cycle ne protège pas contre le VIH/SIV ou les autres infections sexuellement transmissibles.

Le Collier du Cycle n'est pas un préservatif. Gardez-le dans un sac en tissu et non dans un sac en plastique.

Appendix B: Insert Round 2



Collier du Cycle
Planification familiale naturelle et efficace

Qu'est-ce que le Collier du Cycle ?

Le Collier du Cycle est un collier avec deux perles de différentes couleurs ou afin à identifier les jours où une femme peut tomber enceinte.

La FLECHE indique la direction vers laquelle il faut déplacer la perle.

La perle MAIRON FORTÉ vous aide à savoir si vos règles sont arrivées trop tôt.

Toutes les perles MAIRON FORTÉ respectent les jours où il est peu probable que vous tombiez enceinte.

Toutes les perles BLANCHES respectent les jours où il est possible d'être enceinte.

Qui peut utiliser le Collier du Cycle ?

- Les femmes qui veulent leurs règles commencer toujours par un mois entier.
- Les femmes qui veulent utiliser un préservatif ou s'abstenir pendant les jours où la femme peut tomber enceinte.

Comment utiliser le Collier du Cycle ?

- Le premier jour de vos règles, mettez l'anneau sur la perle ROUGE.
- Mélanges également le jour de votre ovulation.
- Déplacez l'anneau chaque jour d'un cran à la suite, même les jours où vous avez vos règles. Trouvez l'anneau l'anneau dans le sens de la flèche.
- Arrêtez-vous deux jours après avoir utilisé un préservatif ou abstenu de l'acte sexuel pendant sept jours consécutifs.
- Vous pouvez aussi faire rapport sexuel lorsque l'anneau est sur la perle MAIRON FORTÉ. Vous pouvez tomber enceinte pendant ces jours-là.
- Mettez à nouveau l'anneau sur la perle ROUGE le jour où vos règles recommencent et suivez les autres jours qui suivent.

Suivre les règles avec le Collier du Cycle

- Pour utiliser le Collier du Cycle, les règles doivent commencer pendant la période blanche entre la perle MAIRON FORTÉ et la perle blanche.
- Si les règles commencent avant la perle MAIRON FORTÉ, c'est trop tôt.
- Si les règles ne commencent pas le lendemain après que l'anneau est sur la dernière perle blanche, c'est trop tard.

Si les règles surviennent trop tôt ou trop tard plus d'une fois par an, consultez un prestataire de soins.

Que faire si vous avez oublié de déplacer l'anneau ?

Si vous avez oublié de déplacer l'anneau, vérifiez sur le calendrier le jour où les dernières règles ont commencé.

Ensuite, commencez par le premier jour des dernières règles, comptez le nombre de jours que vous devez aller jusqu'à aujourd'hui.

Enfin, commencez par la perle ROUGE, déplacez l'anneau le nombre de jours qu'il y a eu de jours écoulés jusqu'à aujourd'hui.

Quand faut-il revenir voir le prestataire de soins ?

- Si vous avez eu les rapports sexuels non protégés un jour où l'anneau était sur une perle blanche.
- Si vous pensez être enceinte.
- Si les règles surviennent trop tôt.
- Si les règles surviennent trop tard.

Quand pourriez-vous commencer à utiliser le Collier du Cycle ?

Vous pouvez commencer à utiliser le Collier du Cycle dès que les règles arrivent.

Le Collier du Cycle ne protège pas contre le VIH/SIV ou les autres infections sexuellement transmissibles.

Le Collier du Cycle n'est pas un préservatif. Gardez-le dans un sac en tissu et non dans un sac en plastique.

Appendix C: Insert Round 3



Collier du Cycle

Planification familiale naturelle et efficace

Qu'est-ce que le Collier du Cycle ?

Le Collier du Cycle est un collier qui représente le cycle menstruel. Chaque perle représente un jour du cycle. Les perles sont de différentes couleurs qui aident à identifier les jours où une femme peut tomber enceinte.

La **FLÈCHE** indique la direction vers laquelle il faut déplacer l'anneau. La perle **ROUGE** marque le premier jour de vos règles.

La perle **MARRON FONCÉ** vous aide à savoir si vos règles sont arrivées trop tôt.

Toutes les perles **MARRON** marquent les jours où il est peu probable que vous tombiez enceinte.

Toutes les perles **BLANCHES** marquent les jours où vous pouvez tomber enceinte.



Qui peut utiliser le Collier du Cycle ?



Les femmes qui voient leurs règles normalement séparées par un mois environ.

Les couples qui peuvent utiliser un préservatif ou s'abstenir pendant les jours où la femme peut tomber enceinte.



Comment utiliser le Collier du Cycle ?

1. Le premier jour de vos règles, mettez l'anneau sur la perle **ROUGE**.



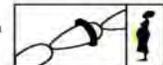
2. Marquez également ce jour sur votre calendrier.



3. Déplacer l'anneau chaque jour, d'une perle à la suivante, même les jours où vous avez vos règles. Toujours déplacer l'anneau dans le sens de la flèche.



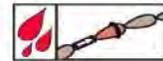
4. Abstenez-vous des rapports sexuels ou utiliser un préservatif les jours où l'anneau se trouve sur l'une des perles **BLANCHES**. Vous pouvez tomber enceinte ces jours-là.



5. Vous pouvez avoir des rapports sexuels lorsque l'anneau se trouve sur l'une des perles **MARRON**. Il est peu probable que vous tombiez enceinte ces jours-là.



6. Mettez à nouveau l'anneau sur la perle **ROUGE** le jour où vos règles reviennent et sautez les perles qui restent.



Quelques femmes devraient attendre un peu avant d'utiliser le Collier du Cycle.

Les femmes qui ont récemment accouché ou qui sont allaitantes, devraient attendre un peu avant d'utiliser le Collier du Cycle.



Les femmes qui ont récemment utilisé une autre méthode de la planification familiale devraient attendre un peu avant d'utiliser le Collier du Cycle.



Dans ces cas, il est probable que les règles ne soient pas encore régulières. Elle devrait consulter avec son prestataire.

Suivre les règles avec le Collier du Cycle

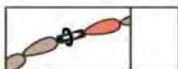
Pour utiliser le Collier du Cycle, les règles doivent commencer pendant la période située entre la perle marron foncée et la dernière perle marron.



Si les règles commencent avant la perle **MARRON FONCÉE**, c'est trop tôt.



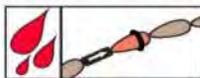
Si les règles ne commencent pas le lendemain après que l'anneau soit sur la dernière perle marron, c'est trop tard.



Si les règles surviennent trop tôt ou trop tard plus d'une fois par an, consulter un prestataire de soins.

Quand pourriez-vous commencer à utiliser le Collier du Cycle ?

Vous pouvez commencer à utiliser le Collier du Cycle dès que les règles arrivent.



Que faire si vous avez oublié de déplacer l'anneau ?

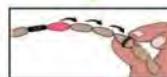
Si vous avez oublié de déplacer l'anneau, suivez les instructions suivantes :

Premièrement, vérifiez sur le calendrier, le jour où les dernières règles ont commencé.



Ensuite, commençant par le premier jour des dernières règles, comptez le nombre de jours qui se sont écoulés jusqu'à aujourd'hui.

Enfin, commençant par la perle **ROUGE**, déplacez l'anneau le nombre de fois (perles) que le nombre de jours écoulés jusqu'à aujourd'hui.



Le collier du Cycle ne protège pas contre le Sida/VIH ou les autres infections sexuellement transmissibles.
Le Collier du Cycle n'est pas un jouet. Gardez-le dans un lieu sûr et loin des enfants.

Breveté pour les États-Unis N° 6.747.917.92. Licence accordée au Développement à l'étranger. Collier du Cycle est distribué sous licence.

Quand faut-il revenir voir le prestataire de soins ?

Si vous avez eu les rapports sexuels non protégés un jour où l'anneau était sur une perle blanche.



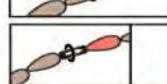
Si vous pensez être enceinte.



Si les règles surviennent trop tôt.



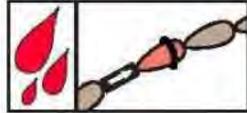
Si les règles surviennent trop tard.



Appendix D: Insert Round 4

Comment utiliser le Collier du Cycle ?

1. Le premier jour de vos règles, mettez l'anneau sur la perle ROUGE.



2. Marquez également ce jour sur votre calendrier.

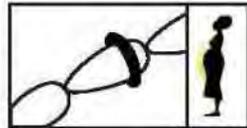


3. Déplacer l'anneau chaque jour, d'une perle à la suivante, même les jours où vous avez vos règles.

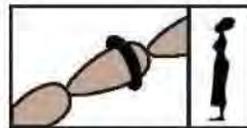
Toujours déplacer l'anneau dans le sens de la flèche.



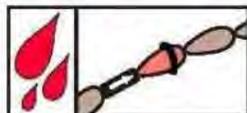
4. Abstenez-vous des rapports sexuels ou utiliser un préservatif les jours où l'anneau se trouve sur l'une des perles BLANCHES. Vous pouvez tomber enceinte ces jours-là.



5. Vous pouvez avoir des rapports sexuels lorsque l'anneau se trouve sur l'une des perles MARRON. Il est peu probable que vous tombiez enceinte ces jours-là.

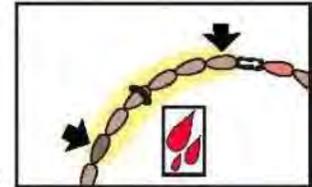


6. Mettez à nouveau l'anneau sur la perle ROUGE le jour où vos règles reviennent et sautez les perles qui restent.

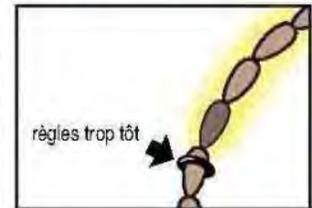


Suivre les règles avec le Collier du Cycle

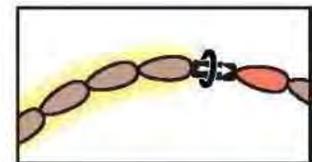
- Pour utiliser le Collier du Cycle, les règles doivent commencer pendant la période située entre la perle MARRON FONCÉE et la dernière perle marron.



- Si les règles commencent avant la perle MARRON FONCÉE, c'est trop tôt !



- Si les règles ne commencent pas le lendemain après que l'anneau soit sur la dernière perle marron, c'est trop tard.



Si les règles surviennent trop tôt ou trop tard plus d'une fois par an, consulter un prestataire de soins.

Appendix E: Final Insert

Planification familiale naturelle et efficace

Collier du Cycle

Quand faut-il revenir voir le prestataire de soins ?

- Si vous avez eu les rapports sexuels non protégés un jour ou l'autre, vous devez revenir.
- Si vous pensez être enceinte.
- Si les règles surviennent trop tôt.
- Si les règles surviennent trop tard.

Qu'est-ce que le Collier du Cycle ?

Le Collier du Cycle est un collier qui représente le cycle menstruel. Chaque perle représente un jour du cycle. Les perles sont de différentes couleurs qui aident à identifier les jours où une femme peut tomber enceinte.

La **FLÈCHE** indique la direction vers laquelle il faut déplacer l'anneau.

La perle **MARRON FONCÉ** vous aide à savoir si vos règles sont arrivées trop tôt.

Toutes les perles **MARRON** marquent les jours où il est peu probable que vous tombiez enceinte.

La perle **ROUGE** marque le premier jour de vos règles.

Toutes les perles **BLANCHES** marquent les jours où vous pouvez tomber enceinte.

Qui peut utiliser le Collier du Cycle ?

Les femmes qui voient leurs règles normalement séparées par un mois environ.

Les couples qui peuvent utiliser un préservatif ou s'abstenir pendant les jours où la femme peut tomber enceinte.

- Le Collier du Cycle ne protège pas contre le Sida/VIH ou les autres infections sexuellement transmissibles.
- Le Collier du Cycle n'est pas un jouet. Gardez-le dans un lieu sûr et loin des enfants.

Breveté pour les États-Unis. N° 6 747 917.92. Licence exclusive de fabrication à l'étranger. Collier du Cycle est distribué sous licence.

Comment utiliser le Collier du Cycle ?

- Le premier jour de vos règles, mettez l'anneau sur la perle **ROUGE**.
- Marquez également ce jour sur votre calendrier.
- Déplacer l'anneau chaque jour, d'une perle à la suivante, même les jours où vous avez vos règles. Toujours déplacer l'anneau dans le sens de la flèche.
- Abstenez-vous des rapports sexuels ou utilisez un préservatif les jours où l'anneau se trouve sur l'une des perles **BLANCHES**. Vous pouvez tomber enceinte ces jours-là.
- Vous pouvez avoir des rapports sexuels lorsque l'anneau se trouve sur l'une des perles **MARRON**. Il est peu probable que vous tombiez enceinte ces jours-là.
- Mettez à nouveau l'anneau sur la perle **ROUGE** le jour où vos règles reviennent et sautez les perles qui restent.

Suivre les règles avec le Collier du Cycle

- Pour utiliser le Collier du Cycle, les règles doivent commencer pendant la période située entre la perle **MARRON FONCÉE** et la dernière perle **marron**.
- Si les règles commencent avant la perle **MARRON FONCÉE**, c'est trop tôt.
- Si les règles ne commencent pas le lendemain après que l'anneau soit sur la dernière perle **marron**, c'est trop tard.

Si les règles surviennent trop tôt ou trop tard plus d'une fois par an, consulter un prestataire de soins.

Quand pourriez-vous commencer à utiliser le Collier du Cycle ?

Vous pouvez commencer à utiliser le Collier du Cycle dès que les règles arrivent.

Quelques femmes devraient attendre un peu avant d'utiliser le Collier du Cycle.

- Les femmes qui ont récemment accouché ou qui sont allaitantes, devraient attendre un peu avant d'utiliser le Collier du Cycle.
- Les femmes qui ont récemment utilisé la pilule ou l'injection devraient attendre un peu avant d'utiliser le Collier du Cycle.

Dans ces cas, il est probable que les règles ne soient pas encore régulières. Elle devrait consulter avec son prestataire.

Que faire si vous avez oublié de déplacer l'anneau ?

Si vous avez oublié de déplacer l'anneau, suivez les instructions suivantes :

- Premièrement, vérifiez sur le calendrier, le jour où les dernières règles ont commencé.
- Ensuite, commençant par le premier jour des dernières règles, comptez le nombre de jours qui se sont écoulés jusqu'à aujourd'hui.
- Enfin, commençant par la perle **ROUGE**, déplacez l'anneau le nombre de fois (perles) que le nombre de jours écoulés jusqu'à aujourd'hui.

*Recent adaptations to emphasize the need for hormonal family planning users to wait to use the SDM were not tested in this study, and will require additional field testing to ensure comprehension.