

# Options for maintaining quality family planning counseling: strategies for refresher training

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## Abstract

**Objective.** To maintain knowledge over time, new family planning providers require refresher training and support, which can be costly and time consuming. The Knowledge Improvement Tool (KIT), guides family planning supervisors to ask recently trained providers a list of questions, reinforce correct answers and address knowledge gaps regarding provision of the Standard Days Method (SDM). This study compares the cost and effectiveness of the KIT to other methods of reinforcing SDM knowledge.

**Design.** An experimental design was used.

**Setting.** Several departments around Guatemala City and in the highlands of Guatemala.

**Participants.** Providers belonging to PROREDES, a network of non-governmental organizations (NGO) funded by the United States Agency for International Development.

**Intervention.** Providers received either: (i) individual KIT, (ii) group KIT, (iii) 2-h refresher training or (iv) no refresher training.

**Main outcome measures.** Total provider scores on pseudo-simulated client counseling session and costs associated with each refresher type.

**Results.** All groups who received refresher training scored well overall (over 70%), compared with only 42% for the group with no refresher training. Providers who received individual KIT retained more knowledge over time, but it was the most costly.

**Conclusions.** Some type of reinforcement is needed following initial training. Programs must consider what is most practical in terms of existing supervision systems and budgets. Individual application of KIT is primarily appropriate for programs that already conduct routine supervisory visits of individual providers and can integrate KIT. Group KIT or traditional refresher training produce slightly lower results at significantly less cost.

**Keywords:** Standard Days Method, CycleBeads, family planning, supervision, quality improvement, training/education

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## Introduction

It is widely recognized that provider knowledge decays over time following initial training in family planning (FP). To maintain their knowledge, new FP providers require refresher training and support, which can be costly and time consuming. A number of strategies for providing refresher training and support have been used in various countries and found to be effective for improving the quality of FP/reproductive

health services. For example, the Family Planning Unit of the Ministry of Health (MOH) of Guatemala assessed two strategies; replacing health unit supervision with a 1-day meeting at the district level and a self-assessment checklist to assess service delivery problems based on the COPE strategy [1]. Both new supervision strategies were found to be more effective than traditional supervision. Another study in Kenya demonstrated that post-training, on-site supervision by the in-charge supervisor could improve quality of care at

the supervisor, provider and client-provider interaction levels [2].

A systematic review of various approaches to improving provider performance including 102 trials found the following types of interventions: distribution of educational materials, conferences or lectures, outreach visits to providers, 'educationally affluent' colleagues, patient-mediated interventions, audits, reminders, identifying barriers to change and consensus processes [3]. Distribution of educational material and conferences were shown to have little or no effect on provider performance. The remaining interventions varied in effectiveness, with most of them showing moderate effectiveness. Other relative costs of these strategies were not discussed.

The Population Council created the 'Instrumento de Diagnóstico y Realimentación Individual' (diagnostic and individual feedback instrument, IDRI) during the INOPAL I Project in Peru [4]. This strategy allows the identification of specific provider errors and corrects them immediately. It was shown to improve providers' knowledge significantly more, in less time and at less cost than traditional refresher training courses. The IDRI was adapted to both monitor and maintain provider knowledge of the Standard Days Method<sup>®</sup> (SDM) over time.

The SDM is a fertility awareness-based method of FP based on the fact that there is a 'fertile window' during a woman's menstrual cycle—a window of days during which she can, with varying degrees of likelihood, become pregnant as a result of unprotected intercourse. CycleBeads<sup>®</sup>, a color-coded string of beads, is a visual tool to help women learn and use the SDM by helping them track her cycle days, identify when she is fertile and monitor her cycle length. The SDM and CycleBeads were developed and tested by the Institute for Reproductive Health (IRH), Georgetown University [5] and were introduced through FP programs in several countries. Usually, upon completion of 1- or 2-day trainings, FP providers are able to offer the SDM competently. However, monitoring data from introduction studies revealed that, as with other methods, providers' knowledge about the SDM and their ability to counsel clients correctly in its use required post-training support (Lundgren, personal communication, 23 March 2009). Being the first time the SDM, a knowledge-based method, would be offered, IRH recognized that providers would need ongoing supervision and support and as such developed a low-cost approach for supervision based on the IDRI.

The resulting supervision tool, known as the Knowledge Improvement Tool (KIT), guides FP supervisors to prompt a role-play of counseling behaviors and to ask the provider a series of questions. Supervisors then reinforce correct answers, and address any knowledge gaps regarding their provision of SDM to clients. During subsequent visits, supervisors focus on the areas where weaknesses were observed previously, thus providing targeted reinforcement and saving time. The KIT has been used for the last few years in programs offering the SDM in several countries, and evidence suggests that after two supervision visits, provider knowledge reaches and maintains an acceptable level of 60% [6, 7].

However, questions remained regarding the effectiveness of KIT compared with traditional forms of refresher training, such as group events which bring together several providers and a trainer for a few hours of training. This study was designed to compare the effectiveness and the cost of the KIT to other methods of reinforcing SDM provider knowledge.

## Methods

### Background

IRH, at the request of the MOH and the Social Security Institute, has been working to integrate the SDM into FP services in Guatemala since 2002 when the method was first included in the national contraceptive norms [8]. As part of the effort to include the SDM in private sector services, IRH partnered with PROREDES, a network of non-governmental organizations (NGO) funded by the United States Agency for International Development (USAID), to provide training to its member NGOs on the SDM. The PROREDES NGOs are active in several departments around Guatemala City and in the highlands. In addition to working on issues related to health and FP, the NGOs had a variety of other programs including education, microcredit and agriculture. All were providing FP services through clinic-based and/or community based-services. Methods offered included Depo-Provera<sup>®</sup>, intrauterine devices, condoms and the pill. Providers included doctors, nurses, nurse auxiliaries, traditional birth attendants and community health workers. Given the large indigenous population in Guatemala, most of these NGOs had staff who spoke local languages in addition to Spanish, including Kakchiquel, K'iché and Mam.

Over 350 people from 10 PROREDES NGOs were trained in the SDM by IRH via a 1-day training in 2004. All participants were trained within a 2-month time span by the same trainer. The trainings, all conducted in a participatory manner for low-literacy providers, covered: informed choice in FP counseling, screening for method eligibility, teaching how to use CycleBeads, counseling on how to handle the fertile days, involving men in supporting SDM use, conducting follow-up visits, raising awareness of the method in the community, recording users in the management information system and using job aids.

### Intervention

Of the 350 people trained, 31 were supervisors and 13 were project coordinators. Given the instability of community-based NGOs, it was not expected that all 306 providers who participated in the initial trainings would still be with their respective organizations nearly 18 months later, or that they would still be offering the SDM. In addition, given that USAID funding for the PROREDES network had come to an end, there was some question as to whether these organizations would still be engaged in providing reproductive health services. Therefore, a questionnaire was developed

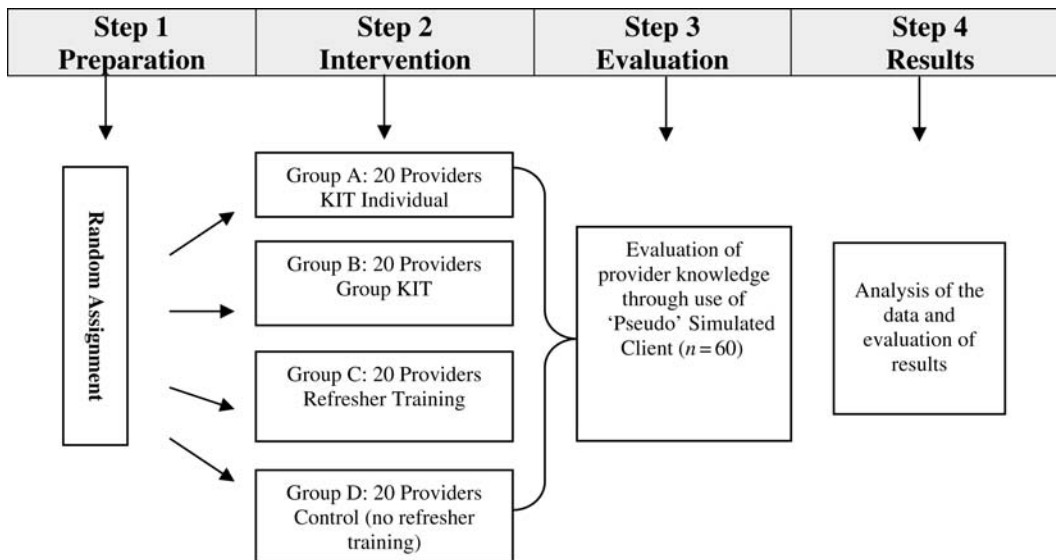


Figure 1 Study implementation process.

and applied to assess the current staffing and status of FP in each of the participating NGOs. All trained providers who were still offering the SDM were invited to participate in the study. Virtually all of the providers who went on to offer the method after training were nurse auxiliaries and traditional birth attendants (comadronas); and all 80 of these providers were contacted and agreed to participate in the study.

The 80 providers were randomly assigned to four groups, independent of their provider type or organization, each receiving a different type of refresher training: (i) KIT applied on an individual basis by a supervisor; (ii) KIT applied in a group setting by a supervisor; (iii) a 2-h group refresher training led by an SDM trainer; and (iv) no refresher training. The four groups were comparable at baseline due to the random assignment of providers. Figure 1 depicts the process of study implementation.

### Study design

Three months after the intervention, provider knowledge was evaluated through the use of pseudo-simulated clients. Participants were spread out over a large geographic area of the Guatemalan highlands so a transportation route was planned that would cover the most number of participants; therefore, 20 of the 80 participants who were interviewed at baseline could not be reached for the pseudo-simulated counseling session due to budget constraints and logistic considerations. There is no reason to think that the 20 participants who were excluded would be different from the 60 who were reached. The pseudo-simulated client methodology is based on the simulated client technique in which trained people enact a specific client role, observe providers' counseling and report observations [9, 10]. In this case, the providers were aware the simulated client was role-playing. The pseudo-simulated client was a trained woman who played the role of a client for whom the SDM is appropriate. She

- The wife of a businessman
- Has finished high school
- Is 25 years old
- Has two children (4 years and 11 months)
- Would like to have more children in the future
- Is currently breastfeeding
- No intra-family violence
- Menstruation returned 5 months ago
- Period comes every month or so around the same date (approximately every 4 weeks)
- Almost never menstruates before or after when expected
- Knows the date of her last menstrual period
- Is on the sixth day of her menstrual cycle
- Used the rhythm method in the past (but got pregnant)
- Wants to choose a method
- Fears side effects of hormonal methods
- Is afraid to insert something inside
- She wants to use the SDM
- Will practice abstinence or condom during the fertile days
- Her husband agrees to abstain or use condoms during the fertile days

Figure 2 Pseudo simulated client profile.

enacted the profile of a woman who knows the date of her last menstruation, is interested in using the SDM and meets the eligibility criteria. The complete profile is shown in Fig. 2. The provider was offered the job aids provided in the SDM training, including a set of CycleBeads, to use during the simulated counseling session if s/he desired.

A trained person observed the counseling and completed a checklist. The checklist covered all of the key elements that are associated with good quality SDM counseling, and essentially reflects the information covered in the KIT itself including couple communication, method eligibility criteria, handling the fertile days and how to use CycleBeads. As each item was addressed, or omitted, by the provider, the observer checked off its presence or absence on the checklist. Those key elements are subdivided into five categories of competency: client needs assessment, contraindications, user instructions, follow-up and use of support materials.

This information was then entered into an EXCEL spreadsheet for analysis. The total provider scores on pseudo-simulated client counseling session were computed by two methods: the average for each of the previously named categories and the average for each key element. The category average assumes that each category is equally important for quality counseling. However, some categories contain fewer key elements, and thus some key elements are given more weight. The key element average gives equal importance to each key element, but would give more weight to categories with more key elements. Means and one-way analysis of variances with Tukey *post hoc* tests were computed using SPSS 16.0. The study protocol was approved by Georgetown University’s Institutional Review Board.

In addition to gathering information on the effectiveness of each intervention, there was an interest in ascertaining the relative cost effectiveness of each approach. Therefore, cost data were collected for each of the three refresher training approaches. This consisted of the time required for the refresher training/use of KIT, the cost of materials and additional costs such as transportation and venue. The total cost of each intervention was divided by the number of total participants in order to establish the cost of refresher training per provider.

**Results**

Table 1 provides information on whether or not the organizations were currently offering the SDM or planned to do so in the future. Of the 10 participating organizations, the interviewer succeeded in interviewing eight program managers. All reported that they continued to offer FP. They also indicated a strong interest in providing the SDM. Those organizations which were not offering SDM services, due to the end of PROREDES network funding, requested support in the form of follow-up training, promotional materials and CycleBeads.

Of the original 80 providers, 60 participated in the simulated counseling session. This report provides information on the 60 individuals [3 nurses, 37 community health workers (CHWs) and 20 midwives] for which end line and cost data are available. The organizations that the providers represented were ADISS (17 CHWs), ADEMI (one CHW), PRODESCA (three CHWs), Renacimiento (three nurses, one CHW), Caroll Bertholl (five CHWs), CORSADEC (10 CHWs) and Codecot (20 midwives). Table 2 shows the distribution of each type of provider within each intervention group.

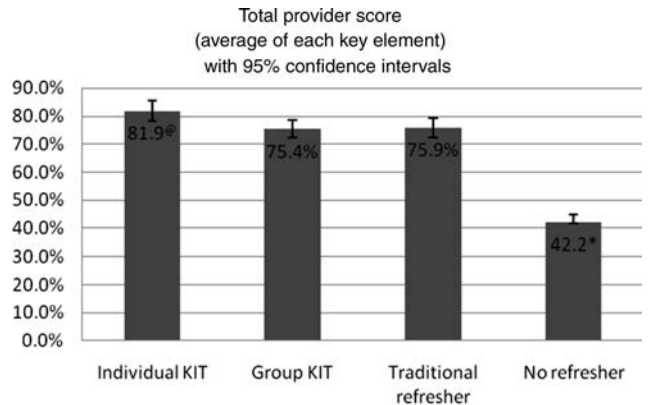
Figure 3 shows the providers’ total scores on the pseudo-simulated client counseling session (based on an average of each key element). All providers receiving refresher training scored higher than those receiving no refresher training (42%), with the individual KIT producing providers with the highest scores (82%). The sample sizes for the study groups were very small; only 15 observations were conducted in each group. Thus, the fact that statistically significant results (ANOVA, Tukey *post hoc* test) were observed strongly suggests

**Table 1** Organizational SDM status

Question	Number of Organizations (n = 8)
Organizations currently offering FP	8
Programs offering the SDM	4
Intention to offer the SDM in the future	7
CycleBeads in stock	5

**Table 2** Distribution of provider type within each intervention group

Intervention group	Number of Nurses	Number of CHWs	Number of midwives	Total number
Individual KIT	1	11	3	15
Group KIT	1	8	6	20
Traditional refresher	1	10	4	15
No refresher	0	8	7	15



\*significantly different from all other intervention groups at  $P < 0.01$   
 @significantly different from group KIT at  $P < 0.05$

**Figure 3** Provider total score on pseudo-simulated client counseling session.

that some type of support or training is needed following initial training.

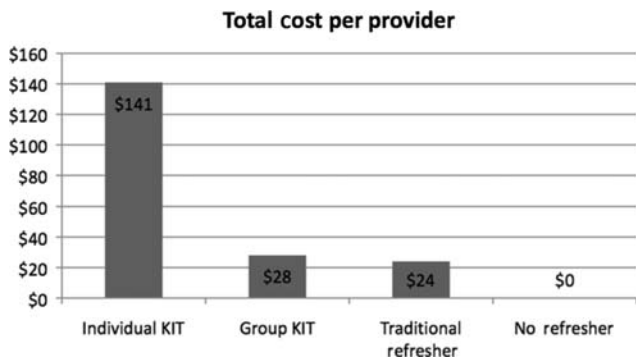
Table 3 shows the average percent of key elements covered correctly by providers in each intervention group. All of the groups which received refresher training scored over 70% overall, compared with the group with no refresher training which scored only 42%. Of the type of refresher trainings/support tested in this study, individual application of the KIT would be the best programmatically due to the significant difference in the ‘user instructions’ sub-score (91% in comparison to 45% for the control group).



**Table 3** Average percent of key elements covered during counseling by intervention group

	Number of questions	Individual KIT	Group KIT	Traditional refresher	No refresher
<b>Number of Participants</b>		15	14	15	15
<b>Client Needs Assessment</b>	6	84.4% <sup>a</sup>	77.4%	78.9%	40.0% <sup>a</sup>
<b>Contra-indications</b>	10	84.0%	81.4%	78.0%	46.7% <sup>a</sup>
<b>User Instructions</b>	10	90.7% <sup>b</sup>	79.3%	82.7%	44.7% <sup>a</sup>
<b>Follow-up</b>	6	72.2%	70.2%	70.0%	30.0% <sup>a</sup>
<b>Use of Support Materials</b>	4	65.0%	55.4%	58.3%	46.7% <sup>c</sup>
<b>Total (average of categories)</b>	36	79.3% <sup>d</sup>	72.7%	73.6%	41.6% <sup>a</sup>

<sup>a</sup>Significantly different from all other intervention groups at  $P < 0.01$ . <sup>b</sup>Significantly different from group KIT at  $P < 0.001$  and traditional refresher at  $P < 0.05$ . <sup>c</sup>Significantly different from individual KIT at  $P < 0.001$  and traditional refresher at  $P < 0.05$ . <sup>d</sup>Significantly different from group KIT at  $P < 0.05$ .

**Figure 4** Total cost per provider of each refresher training type.

Even though the groups receiving refreshers scored well overall (over 70%), the results suggest areas that need improvement such as the use of support materials, which providers consistently fail to use. The observations of the simulated counseling revealed deficiencies related to partner issues and use of condoms in all intervention groups. Specifically, providers failed to offer to provide information to the simulated client's partner, offer to explain how to use a condom, give the client condoms, refer to the job aids to explain the SDM or use any other tools (besides CycleBeads).

Although the importance of refresher training and supervision is widely recognized, most programs lack sufficient

resources to provide follow-up to newly trained providers. As seen in the cost data in Fig. 4, the individual application of the KIT is the most costly of the refresher methods (\$141 per participant), whereas group application of the KIT and traditional refresher trainings cost about the same amount (\$28 and \$24, respectively). As shown in Table 4, applying KIT individually is more expensive because of the cost of the trainer's time and travel and requires more printing of materials. The cost of group KIT and traditional refresher trainings include refreshments, participant transportation and venue.

## Discussion

There are some limitations to this study. Namely, there were a large number of providers who were trained in SDM but who were not offering it at the time of the intervention. Therefore, the sample of providers in this study may be biased in comparison to the general pool of FP providers. However, the results are still valid as the remaining providers were randomly assigned to each study group. Another limitation is that the observations were simulated, so we are only measuring what providers are capable of in a simulated environment, not their actual behavior.

Supervision, although critical to ensure quality services, can be expensive and is often overlooked in program planning and budgeting. The results of this study suggest that refresher training is essential for the sustained capacity of

**Table 4** Costs by category of each intervention

Intervention	Time of trainer (GTQ)	Cost of materials	Refreshments	Participant transport	Venue	Other (including trainer transportation and food)	Total cost
Individual KIT	\$424	\$411	\$0	\$0	\$0	\$1,975	\$2,810
Group KIT	\$65	\$46	\$68	\$296	\$43	\$42	\$561
Traditional refresher	\$49	\$39	\$101	\$205	\$43	\$40	\$477
No refresher	\$0	\$0	\$0	\$0	\$0	\$0	\$0

SDM providers, as is likely for all FP methods. Without refresher training, providers' knowledge falls below the minimum level accepted for SDM providers (60%).

However, although overall knowledge is acceptable with refresher training, there are some specific areas where there is still room for improvement. These areas, such as addressing partner issues and providing condom counseling, seem more related to provider attitudes than knowledge, which are more difficult to change. Also, even after refresher training, providers tended not to use support materials, which seems to be a trend amongst FP providers in general. For example, a study of the Balanced Counseling Strategy found that only 37% of providers used all the job aids [11, 12]. As knowledge was above the minimum acceptable levels without use of job aids, it is questionable how important the job aids are. On the other hand, if the providers had used the job aids, they may not have needed the refresher training.

Individual application of the KIT is the optimum approach, but requires more resources for limited added benefit. Therefore, individual KIT is primarily appropriate for programs that already conduct site visits and can therefore integrate KIT into their routine supervisory visits with little additional cost. Use of the KIT as a structured supervision tool could make perfunctory supervision visits more effective, especially if it were expanded to cover all FP methods. Programs that cannot integrate KIT into regular supervision visits could consider either group KIT or traditional refresher trainings. Group KIT and traditional refresher trainings produce similar results, with the group KIT approach being slightly less expensive.

Programs must consider what is most practical in terms of existing supervision systems and their respective budgets. Since the KIT is designed as a simulated counseling session, it can be adapted for other FP methods or even other primary health programs. This has been done in two ways: some programs have chosen to use a condensed KIT for integrated supervision tools that cover all FP methods or other programs have chosen to focus on a different method during each supervision visit. When used in Honduras, the KIT was used to help a child survival program integrate FP by focusing on a different topic during each supervision visit. Program managers should be aware that even if application of KIT is integrated into individual supervisors' work plans, it may not actually be used. Thus the other refresher strategies may still be required.

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