Quality of delivery of the Standard Days Method as compared with contraceptive pills in Rwanda

Federico R León, Caroline Blair, Ana Huapaya, Rebecka Lundgren, Marie Mukabatsinda, Félix Muramutsa, Victoria Jennings

Abstract

Background and methodology Replicating a Peruvian study, this research introduced the Standard Days Method (SDM) into Rwanda Ministry of Health clinics and evaluated client counselling on the new method against that given for contraceptive pills. Providers received technical reinforcement concerning established methods in addition to SDM training. To evaluate their quality of care, simulated clients implemented a service test in visits to 20 clinics. Results As in Peru, providers exchanged significantly more relevant information with clients who chose SDM than with those who chose pills. Also, a minority of providers posed barriers to SDM access by refusing to give SDM tools to the client until she brought her partner for consultation. Conclusions The findings of this study confirm that SDM counselling is generally satisfactory, although SDM training needs adjustment, and that the rigour of providers' pill counselling remains below capacity.

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Key message points
- The detailed counselling given to clients on the Standard Days Method (SDM) indicates strong provider training on this new family planning method.
- The requirement that the partner be present during SDM counselling must be removed.
- The less detailed counselling received by pill clients shows that providers perform below capacity when they deliver this contraception method.

Background

The Standard Days Method (SDM) identifies Days 8 to 19 of the menstrual cycle as the fertile window. The target group is women with 26–32-day menstrual cycles who are willing to avoid unprotected intercourse on fertile days. Users rely on CycleBeads®, a color-coded string of beads representing the menstrual cycle, to identify whether they are on a day when pregnancy is likely. Probability of pregnancy is 0.0475 with correct use and 0.12 with typical use. Research in Peru showed that 2-day SDM training enabled providers to give clients detailed SDM counselling (Leon et al., unpublished observations, 2006). However, providers posed barriers to SDM access (i.e. some refused to give SDM tools to clients until they studied their menstrual cycle and/or brought their partner for consultation) and gave less detailed counselling to clients who chose hormonal methods.

Methods

The study replicated the research at Rwanda Ministry of Health clinics. The site selected was the Rwandan province of Byumba (91% rural) where the prevalence of use of modern methods is 5.3%. The site was convenient because the Ministry of Health operated 20 clinics that delivered nine established methods, including pills (combined hormones, 28-day pack), and SDM was not yet available. Ethical clearance for the research was obtained from the Institutional Review Board of Georgetown University.

Interventions

A 9-day contraceptive update workshop for providers was conducted in September 2004 as part of the ongoing programme to build capacity. All methods regularly provided by the programme were addressed. At this time, providers' consent to receive visits by simulated clients was requested. Project staff introduced the SDM later (February–March 2005) through a 2-day workshop. The agenda included SDM's scientific basis and management of SDM clients. Providers received an SDM counselling manual and the clinics were provided with SDM user aids. Finally, providers were given feedback on their method delivery (July 2005), based on the service test Trial 1 described below.

Measurement tool

Routine quality of care was measured by the service test, which consisted of a client script depicting a contraceptive history, conjugal circumstances, and so on; a simulated client who enacted the script as she requested services from a provider who believes s/he is attending a real client; and an observation checklist that the client completed upon leaving the clinic. Two client scripts were used. One entailed choice of SDM: “... would like having children in the future, afraid of side effects of hormonal methods, afraid of inserting anything into uterus, will choose SDM if given the option, on Day 4 of her menstrual cycle, no contraindications to the use of SDM ...”. A second script, referring to a woman with no contraindications to pill use whose husband was using condoms but disliked using them, mandated a pill
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Two two-person teams (one client per script) visited Byumba clinics. One of the teams targeted half the 20 clinics while the other 10 clinics were targeted by the parallel team. Each clinic received the visit of the two types of clients in random order. A first round of visits (Trial 1) took place after the contraceptive update (January 2005). New client cohorts were recruited and trained after provider feedback for Trial 2 (August–September 2005).

Statistical design

The model was a repeated measurements experiment. Two treatments are given to the provider (SDM client visit, pill client visit) and a measurement (e.g. session length) is obtained for each case. Scores for the two client types were compared by means of two-tailed paired samples t-tests. Effect sizes are needed in experiments in addition to conventional statistical tests. To maintain the scale of the original scores, we used the g for independent samples. Consequently, to calculate the 95% confidence interval for g we used s_g (1.96), where s_g = [g^2/2 df_W + N/(n_1 × n_2)]^1/2.

Results

SDM was not yet offered at the time of Trial 1. Table 1 presents the scores that providers attained at Trial 2. The SDM percentage on information exchange was significantly greater than the pill percentage, and the contrast was associated with a substantial effect size. The average raw scores were 39.0 and 31.3, respectively (t = 2.8, p<0.01, effect size = 0.88 ± 0.65). The lower pill score cannot be attributed to the SDM intervention since it did not negatively change from Trial 1 (28.7) to Trial 2. Table 2 also indicates that the differences in interpersonal relations and session length were non-significant. Session length was twice as long as in Peru and the counselling was more detailed.

Table 1 Means and standard deviations for service test Trial 2 scores, and paired t-test and non-paired effect size for the comparison between Standard Days Method and pill clients over three dependent variables in Byumba, Rwanda, 2005 (n = 20)

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>SDM Mean</th>
<th>SDM SD</th>
<th>Pill Mean</th>
<th>Pill SD</th>
<th>t</th>
<th>Effect size (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information exchange</td>
<td>69.64</td>
<td>13.07</td>
<td>48.98</td>
<td>15.31</td>
<td>4.50*</td>
<td>1.41 (0.71 to 2.10)</td>
</tr>
<tr>
<td>Interpersonal relations</td>
<td>7.60</td>
<td>1.31</td>
<td>7.25</td>
<td>1.33</td>
<td>0.92</td>
<td>0.26 (–0.36 to 0.88)</td>
</tr>
<tr>
<td>Session length in minutes (m)</td>
<td>43m 54s</td>
<td>17m 05s</td>
<td>38m 12s</td>
<td>15m 07s</td>
<td>1.01</td>
<td>0.35 (–0.28 to 0.97)</td>
</tr>
</tbody>
</table>

*Percentage of number of items in the respective scale. *p<0.001, two-tailed test. SD, standard deviation; SDM, Standard Days Method.

Fieldwork

The simulated clients, all nurses, were recruited in the capital city of Kigali. Their training lasted 5 days and consisted of introductory presentations and role-playing exercises. Each trainee was trained on only one script/checklist. The exercises specified various levels of care. Each trainee conducted role-plays at each level, as well as practice trials at urban and rural clinics, and received feedback.

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Table 2 Information exchange items that achieved means of at least 0.95 at service test Trial 2 per client type in Byumba, Rwanda, 2005 (n = 20)

<table>
<thead>
<tr>
<th>SDM</th>
<th>Pill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider asked whether I could be pregnant (menstruation, others)</td>
<td>Provider asked whether I had children</td>
</tr>
<tr>
<td>Told me that the injectable is effective if injected every 3 months</td>
<td>The age of the last child</td>
</tr>
<tr>
<td>Asked me to choose a method</td>
<td>Whether I could be pregnant (menstruation, others)</td>
</tr>
<tr>
<td>Whether my periods come more or less when I expect them</td>
<td>About my blood pressure or measured it (or someone else did it)</td>
</tr>
<tr>
<td>Explained how the Standard Days Method (SDM) functions</td>
<td>Told me that I would need to take the pill every day</td>
</tr>
<tr>
<td>Told me what to do if my cycle is too long</td>
<td>Gave me pills or told me that the clinic was out of pills and told me where to get them</td>
</tr>
<tr>
<td>What to do if my cycle is too short</td>
<td></td>
</tr>
<tr>
<td>That the white beads represent days on which I should abstain or have protected sex</td>
<td></td>
</tr>
<tr>
<td>That pregnancy is likely if you have unprotected sex on a fertile day</td>
<td></td>
</tr>
<tr>
<td>To move the black band to the red bead the day my menstruation starts</td>
<td></td>
</tr>
<tr>
<td>To mark the first day of menstruation on my card</td>
<td></td>
</tr>
<tr>
<td>That SDM users must move the black band every day</td>
<td></td>
</tr>
<tr>
<td>That the brown beads represent days on which I can have sex</td>
<td></td>
</tr>
<tr>
<td>Emphasised that if I have unprotected sex on the white beads I am likely to get pregnant</td>
<td></td>
</tr>
<tr>
<td>Told me to return if my period does not return the day after the band passes through the last bead</td>
<td></td>
</tr>
<tr>
<td>Told me to return if my period returns before the day in which the band should reach the dark brown bead</td>
<td></td>
</tr>
</tbody>
</table>
Table 2 presents the information exchange behaviours observed in the consultations with 95% or more of the providers. This overwhelming majority exchanged with SDM clients 16 specific items that covered the essentials of SDM counselling. Additionally, 90% of providers asked whether the client’s husband would be able to abstain or use condoms on her fertile days. Conversely, 20% of providers posed barriers to access by refusing to supply the client with SDM tools unless her partner participated in the consultation. The requirement to study the menstrual cycle only occurred in one case.

Only six items from the pill checklist qualified for inclusion into Table 2. This is not because pill delivery is less complex but because providers did not address some important facts. For example, only 55% of providers asked the pill client if she had heart problems, 20% told her that she should start a new pill packet the day after finishing the previous one, 55% to take one active pill as soon as she remembered having forgotten to take one, 65% that she could experience headaches, and 20% to return to the clinic right away if her skin or eyes turn yellow. These and other provider behaviours of the checklist were essential considering the client characteristics.

Discussion and conclusions
The findings of this study confer international validity to three conclusions: SDM counselling is generally satisfactory, SDM training needs adjustment, and the rigor of providers’ pill counselling remains below capacity.

Providers showed a satisfactory management of SDM cases in terms of the amount and nature of information exchanged with clients. The 70% of the provider behaviours expected in the consultations that were observed included the essential topics. This speaks well of the training system. However, the system needs adjustment to reduce the barrier to access that was posed by a minority of providers. The demand for the husband’s presence initially and in response to problems, 20% told her that she should start a new pill packet the day after finishing the previous one, 55% to take one active pill as soon as she remembered having forgotten to take one, 65% that she could experience headaches, and 20% to return to the clinic right away if her skin or eyes turn yellow. These and other provider behaviours of the checklist were essential considering the client characteristics.

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