A Trailer Study of the Cambodian Midwives Association’s
Continuing Education Program
(CEP)

Produced by:
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Quality and Services
Executive Summary

CMA’s Continuing Education Program

This is a study of the results of a Continuing Education Program (CEP) conducted by the Cambodian Midwives Association (CMA) from July to October 1998. The CEP provided training for 152 CMA midwives from Siem Reap, Kampot, and Pursat provinces. The subjects covered by the CEP were the third stage of labor and postpartum hemorrhage. The training sessions lasted 2½ days and covered the following topics:

- Definition of the third stage of labor
- Separation and expulsion of the placenta
- How the uterine muscles stop bleeding
- How to check for placental separation
- The use of oxytocine in the third stage of labor
- Management of the third stage of labor
- The effect of postpartum hemorrhage on a woman and her family
- Definition, causes and management of postpartum hemorrhage

65 midwife-trainees were randomly selected for a re-test of their knowledge about key CEP topics and practices. The same questions used for a pre-test and post-test of CEP trainees were also used for the re-test, making the three sets of scores comparable. After the re-test, small focus group discussions were held with a sub-sample of midwives. Use of CEP practices and factors affecting use, the training content and procedures, future training topics, and CMA’s assistance to midwives were the principal topics discussed.

Key Findings

CEP was well planned, designed, and conducted. Course content, training materials, the training of trainers, and implementation of the program all appear to have been jobs well done. The trainees and trainers continue to say that, for the most part, they are satisfied with the training, appreciated it, and want more. Yet many of the midwives now report that they have made limited or no use of CEP practices in their work. If that continues, they will soon lose much of whatever they gained from the training. What this decline reflects has much more to do with the use of the skills that were taught than with the program itself.

The re-test results show that knowledge retention from the CEP is still fairly high, especially when re-test scores are compared to pre-test scores. However, the re-test scores also suggest that after initial large gains, the midwives are beginning to forget key CEP information. Some decline is to be expected given the amount of time since the completion of training. While the loss is comparatively small for Siem Reap and Kampot midwives, a 20 percent decline among re-tested Pursat midwives is not a promising sign.
Information from the discussion groups reinforced the view that limited use of CEP practices, not the quality of training, accounts for the decline in scores. From the midwives report, it appears that roughly 50 percent or more of the trainees are not making extensive or frequent use of the training in their government or private work. Some report the contrary – that are indeed using the training frequently, while others said they use the training either in their government job or in their private practice. A common observation that was made by midwives from all three provinces was that the lack of actual practice during the CEP of the procedures taught reduced their willingness to use the training in their work.

Main reasons for limited use of CEP practices are of two main types – structural barriers and low demand for midwife services because of current health-seeking behaviors of rural women. The principal structural barriers are: health facility policies contrary to CEP practices, supervisors opposed to new practices because they do not understand them, and job assignments where midwives do not attend deliveries. Less obvious, but nonetheless important, are cultural factors – unwavering deference to the views of anyone of higher status and more advanced education, accommodation to common beliefs and practices of clients and colleagues even when one has medically sound knowledge to the contrary, and reluctance to be seen as standing out or challenging others by employing alternative, progressive practices.

An unanticipated result of CEP is that it served as a useful source of lessons for the planning of the new Life Saving Skills program supported by RACHA. The weaknesses of the CEP approach have been explicitly avoided in the LSS, and the constraints affecting CEP practices are gradually being addressed through LSS.

Clearly the need for skills upgrading of midwives will continue to be a priority for improving reproductive and child health in Cambodia for the foreseeable future. However, health-seeking behaviors of rural women must change significantly for progressive practices taught by programs such as CEP and LSS to become the prevailing standard for Cambodian women.
A Trailer Study of the CMA’s Continuing Education Program

INTRODUCTION

This is a study of the results of a Continuing Education Program (CEP) conducted by the Cambodian Midwives Association (CMA) from July to October 1998. The CEP provided training for 152 CMA midwives from Siem Reap, Kampot, and Pursat provinces. The subjects covered by the CEP were the third stage of labor and postpartum hemorrhage. Four CMA midwives in each province were first trained as trainers to conduct the CEP in their respective provinces. Technical assistance was provided to CMA to develop the curriculum and training materials, make revisions as needed, and to conduct the CEP. CMA provided logistical and organizational support for the training through its provincial branch offices. The USAID-supported Reproductive and Child Health Alliance (RACHA) provided funding and technical assistance to CMA for the CEP, including per diem costs for the participants.

The training sessions lasted 2½ days and covered the following topics:

- Definition of the third stage of labor
- Separation and expulsion of the placenta
- How the uterine muscles stop bleeding
- How to check for placental separation
- The use of oxytocine in the third stage of labor
- Management of the third stage of labor
- The effect of postpartum hemorrhage on a woman and her family
- Definition, causes and management of postpartum hemorrhage

The training methods consisted of presentations by trainers of the CEP topics, large group discussions, small group activities, demonstrations and pictures/posters to illustrate practices, games, and a quiz/competition among participants. Time was also allotted for a guest speaker presentation on the third day of CEP. Printed course materials were distributed to the participants. However, the CEP included no actual practice of the skills and techniques covered by the course.

The participants were given a pre-test consisting of twelve questions concerning the third stage of labor and postpartum hemorrhage at the beginning of the CEP. The same test was given at the conclusion of the training to assess the gain in knowledge among participants. Participants were also asked to evaluate the topics (useful versus not useful), the teaching methods, the performance of the trainers.¹

¹ The results of a pre/post-test review of the CEP are presented in “Continuing Education Progame – Pilot Workshops Report”, Cambodian Midwives Association, October 1998.
THE PURPOSE AND METHOD OF THIS STUDY

The purpose of this study is to assess: a) the retention of knowledge by the midwife trainees about the topics covered by the CEP, b) the extent to which the CEP skills have been used by the trainees in their government jobs and private practices, and c) the constraints confronted by midwives that limit more extensive use of these skills. The ultimate goal of the study is to provide information that will assist in improving future training programs for midwives.

CMA and RACHA collaborated to conduct this study. A simple random sample consisting of 50 percent of the trainees – or approximately 25 midwives per province - was used as the basis for the study. Those selected were contacted by CMA and asked to come to the CMA branch office on a specified day for a re-test on key CEP topics. The same test used for the pre- and post-test was administered as a “post-post” test, or re-test. Because of some no-shows, the actual number of trainees who participated in the re-testing was: Kampot – 24, Pursat 21, and Siem Reap – 20, giving a total of 65 trainees.

From the three re-test groups, a simple random sample was drawn to select 5 or 6 midwives to participate in focus group discussions in each province. The focus groups were led by experienced interviewers (two medical assistants working with RACHA’s Safe Motherhood team). The discussions were tape recorded and translated into English by the same interviewers. A list of discussion questions/topics guided the focus groups.

The four trainers from each province were also contacted and asked to come to the CMA branch office on the test day. Because of scheduling conflicts, only 10 out of the 12 trainers reported. The trainers were also asked to participate in separate focus groups discussions that were guided by similar topics/questions. They were re-tested on the training skills they were taught in preparation for the CEP, using the same pre/post test administered during the initial training of trainers activity.

See Annex A for a copy of the trainees’ test with the correct answers and discussion group topics/questions; and Annex B for the same materials for the trainers.

This was not central to the main purpose of the study, but information about the retention and use of these skills could be helpful for planning future training activities. The results are presented in Annex C.
### Test Results for Midwife Trainees

<table>
<thead>
<tr>
<th></th>
<th>Test Scores:</th>
<th>Siem Reap</th>
<th>Kampot</th>
<th>Pursat</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- lowest score</td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>- highest score</td>
<td></td>
<td>11</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>- average score</td>
<td></td>
<td>5.8</td>
<td>5.4</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Post-test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- lowest score</td>
<td></td>
<td>5</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>- highest score</td>
<td></td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>- average score</td>
<td></td>
<td>10.7</td>
<td>11.5</td>
<td>10.3</td>
</tr>
<tr>
<td><strong>Change in average pre-test to post-test scores:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- points:</td>
<td></td>
<td>+ 4.9</td>
<td>+ 5.5</td>
<td>+ 5.1</td>
</tr>
<tr>
<td>- percentage:</td>
<td></td>
<td>+ 84%</td>
<td>+ 102%</td>
<td>+ 98%</td>
</tr>
<tr>
<td><strong>Re-test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- lowest score</td>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>- highest score</td>
<td></td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>- average score</td>
<td></td>
<td>9.6</td>
<td>10.1</td>
<td>8.2</td>
</tr>
<tr>
<td><strong>Change in average pre-test to re-test scores:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- points:</td>
<td></td>
<td>+ 3.8</td>
<td>+ 4.7</td>
<td>+ 3.0</td>
</tr>
<tr>
<td>- percentage:</td>
<td></td>
<td>+ 66%</td>
<td>+ 87%</td>
<td>+ 58%</td>
</tr>
<tr>
<td><strong>Change in average post-test to re-test scores:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- points:</td>
<td></td>
<td>- 1.1</td>
<td>- 1.4</td>
<td>- 2.1</td>
</tr>
<tr>
<td>- percentage:</td>
<td></td>
<td>- 10%</td>
<td>- 12%</td>
<td>- 20%</td>
</tr>
</tbody>
</table>

The test results show that significant gains in knowledge about the CEP curriculum occurred as an immediate result of the training. The average post-test scores are high, with trainees recognizing on average the correct responses to 10 or 11 questions out of 12 about the CEP topics. Low scores rose substantially from pre- to post-test, and the results show percentage improvements in average scores from pre-test to post-test ranging from 84 percent to 102 percent.

There are two important points that the re-test results show. First, knowledge retention from the CEP is still fairly high, especially when re-test scores are compared to pre-test scores. The low scores for the re-test remain much higher than those for the pre-test, and the percentage improvements in average scores from pre-test to re-test range from 58 percent to 66 percent.

Second, re-test scores also suggests that after initial large gains, the midwives are beginning to forget key CEP information. While the loss is comparatively small for Siem Reap and Kampot midwives, a 20 percent decline among re-tested Pursat midwives is not a promising sign. Some decline is to be expected given the amount of time since the completion of training. One would expect that the scale of loss would increase over time if there is no subsequent re-enforcement of these messages, e.g., through a refresher course or actual use. However, the results show that the loss in retention of CEP information is smallest in Siem Reap, where training was conducted first in July 1998. Training was conducted last in Pursat during October 1998, but that is where the greatest decline is found.
Information from the focus group discussions suggests that the loss in retention of CEP information is probably even greater than that shown by the test scores. Midwives selected for the re-test reported that they had been informed that the same test would be used, and the day before coming to take the re-test, many reviewed the materials that they had received from the CEP so that they would score higher. Some even requested that tests be given periodically to stimulate them to review these materials!

While anything that encourages trainees to review and refresh their memories of training topics is good, the midwives’ special review for the re-test suggests that the midwife trainees are probably forgetting CEP information to a greater degree than the re-test scores show. If the re-tests were conducted unannounced, i.e., the midwife trainees were asked to complete the test with no prior notice, it is very likely average scores would be lower than those obtained. Again, while some loss in the retention of information from the CEP is predictable, the focus group discussions suggest that these declines are due to limited use of skills and practices taught in the CEP, as opposed to inadequacies in teaching. In short, the re-test results should be viewed as “lower limits” to the gradual loss of information from the CEP training over time.

Another use of the re-test results is to examine the percentage of wrong answers for each question to identify where common weaknesses in knowledge exist. The following table presents these results.

<table>
<thead>
<tr>
<th>Question</th>
<th>Percent Wrong</th>
</tr>
</thead>
<tbody>
<tr>
<td>#3. What is the normal third stage of labor?</td>
<td>43%</td>
</tr>
<tr>
<td>#12. A woman has a postpartum hemorrhage after delivery of the placenta. What is the first thing a midwife should do?</td>
<td>34%</td>
</tr>
<tr>
<td>#10. When delivering the placenta by controlled cord traction, what should the midwife do?</td>
<td>29%</td>
</tr>
<tr>
<td>#11. Which one of the following practices should be discouraged as it can cause postpartum hemorrhage?</td>
<td>25%</td>
</tr>
<tr>
<td>#1. What is the third stage of labor?</td>
<td>25%</td>
</tr>
<tr>
<td>#7. What is the definition of a postpartum hemorrhage in a healthy woman?</td>
<td>23%</td>
</tr>
<tr>
<td>#8. In the third stage of labor, when we see lengthening of the cord at the vagina, what is it a sign of?</td>
<td>20%</td>
</tr>
<tr>
<td>#5. How much blood can a woman lose per minute due to postpartum hemorrhage?</td>
<td>20%</td>
</tr>
<tr>
<td>#4. How long does oxytocine take to act when given intra-muscularly?</td>
<td>15%</td>
</tr>
<tr>
<td>#9. When a woman goes into “shock” during postpartum hemorrhage, what signs may be seen?</td>
<td>14%</td>
</tr>
<tr>
<td>#6. Which of the following does not help the uterus to contract after delivery?</td>
<td>9%</td>
</tr>
<tr>
<td>#2. How long does the third stage of labor normally last?</td>
<td>8%</td>
</tr>
</tbody>
</table>

4 Question #3 is reported to be poorly worded and causes confusion among the midwives about exactly what is being asked which accounts for the very high percentage of wrong responses.
There does not appear to be a sharp difference among questions dealing with third stage of labor versus those concerning postpartum hemorrhage, i.e., the questions with the highest percentage of wrong answers (above 20 percent wrong) include both subjects. However, those with a higher percentage of wrong answers consist of exact definitions (Questions #1, #3, and #7) and what are probably new/correct practices for most midwives (Questions #10, #11, and #12). Questions with a lower percentage of wrong answers include signs that a practicing midwife will have seen in normal deliveries (Questions #2, #8, and possibly #9) or familiar practices (Question #6). Questions #5 (a definition question) and #6 (a new practice question) do not fit this pattern and apparently were just learned and remembered by most midwives from the course.
FOCUS GROUP DISCUSSIONS

Use and Usefulness of the CEP Training
Information from the focus group discussions with both trainees and trainers described a very mixed picture concerning the use of the practices taught by the CEP. Some midwives – roughly 10-20 percent varying by province – reported that they were using the CEP training frequently in both their government job and private practice. They spoke of examples of how the CEP practices had been effective. One midwife who was attending nine or ten deliveries per month in her government and private work reported she was using the training regularly and had used the methods she had learned for postpartum hemorrhage.

Other midwives stated that they had used the CEP skills in their government jobs, but not in their private practice. Yet others reported the exact opposite - use in their private practice, but not in their government. While there was general support for the view that these skills were potentially useful, some – roughly 50 percent or more varying by province - reported that they had not made extensive or frequent use of what they had learned during the months following their training, and roughly 10-20 percent reported not using the training at all.

Quite interesting were seemingly conflicting reports about which part of the CEP the midwives used more or less - the third stage of labor or postpartum hemorrhage. Some stated that they used the postpartum hemorrhage practices less, and that the third stage of labor practices are more applicable to the normal deliveries they usually attend. Others stated exactly the opposite - they used the CEP postpartum hemorrhage practices more because those practices are considered close or similar to prevailing practices, while the third stage of labor practices, particularly the use of oxytocine, differed sharply from prevailing policy and practice.

What might account for these contrasting reports is the work location of the respondent. Midwives assigned to hospitals might see enough postpartum hemorrhage cases to have sufficient opportunity to use the CEP skills. Those reporting less use of postpartum hemorrhage skills are likely to be health center midwives who attend very few deliveries at least in their government job.

The reasons identified by the midwives for not making greater use of the CEP training indicate that strong structural barriers in the government work setting prevent more extensive use of CEP practices. These barriers include the following:

- Because the doctors, medical assistants and health center directors who supervise the midwives have not had the CEP training, they are unfamiliar with and do not accept the practices taught by the CEP. Because of their supervisor’s higher position in the work setting, the midwives are unwilling to follow CEP practices that are not approved or supported by their superiors.

- The focus group discussions showed a pronounced difference in the ability to use the CEP practices in government jobs between Pursat midwives versus
those in Kampot and Siem Reap. Pursat midwives are able to use their CEP training because the Pursat Department of Health strongly supports these practices. Pursat is a focus province for the new Life Saving Skills (LSS) program supported by RACHA. The LSS is a much more intensive program than the CEP that includes competency-based training and demonstrated proficiency through actual use of LSS practices. In fact, the training manuals for CEP constitute only two out of eight components of the LSS.

- In sharp contrast to Pursat, Kampot midwives reported that they have very limited opportunity to use CEP training in their government assignments because the official policy governing management of deliveries does not support these new practices. Their supervisors have told them that if they use the CEP practices and there is any subsequent problems, they will not support them and the midwife will be totally responsible for the consequences. Needless to say, this is a powerful deterrent to using the CEP training. However, if policies were changed to supporting these practices, midwives they said that they and their co-workers would use these practices.

- Midwives from Siem Reap pointed out that opportunities to use the skills taught on postpartum hemorrhage and shock are very limited for those working even in hospitals. As a matter of policy, these cases are the responsibility of doctors or medical assistants; midwives may only assist even if they are better trained to manage such cases.

- A number of midwives who attended the CEP are not assigned to maternity wards in health facility. They are working in other sections of the hospital and have no occasion to attend births in their government jobs. Consequently, the CEP training they received is unused at least in their government work.

- Some midwives have no private practice, thus further limiting their opportunity to use the CEP training.

- In general, a number of trainees observed that the use of midwives for deliveries is currently very limited because rural women have greater confidence in the skills of experienced TBAs. Very few women choose to give birth in health centers. The vast majority of rural women prefer to give birth at home with a trusted TBA. Consequently midwives working in health centers have very few opportunities to attend births and use the CEP training. Rural women consider midwives to be too expensive and have too little experience with attending deliveries. Many midwives are indeed young and very inexperienced in comparison to TBAs. This further restricts their use of the CEP training.5

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5 The use of and limitations on midwife services are discussed in two other RACHA Studies: Rural Women and Health Center Use, Staff Employment, and Health Seeking Behavior, Study #4, July 1999; and Training, Employment and Activity Level of Cambodia Midwives Association Members, Study #5, July 1999.
In addition to structural impediments, midwives also reported the following factors restrict use:

- Perhaps most important was the message - sometimes stated, sometimes implied - that the lack of actual practice/use of new CEP procedures in the training program, combined with their uncertainty about their mastery of these practices, discourages some trainees from using the CEP practices more extensively in their work. The use of oxytocine illustrates the point. Several midwives noted that new CEP practices conflict with prevailing, accepted practices. The lack of personal experience with the new practices led them to continue following familiar, established practices rather than adopting the new CEP practices. This is especially the case where the midwives are the only ones in their work place who know about the CEP procedures.

- Several midwives stated that they are reluctant to use the CEP procedures in their private practice because they are working alone and are afraid that if problems arise, no one is there to assist them.

- A number of midwives noted that they rarely encounter, or have never encountered, cases of postpartum hemorrhage in their government job or in their private practice. Therefore, they have had no or very limited opportunity to use the CEP practices concerning postpartum hemorrhage.

- All the Kampot midwives agreed that while the CEP training was, in principal, potentially useful for their work, they did not remember everything taught by the course because there was no actual practice included in the CEP. Consequently, their use of CEP practices is limited.

- One midwife reported that she used oxytocine as taught by the CEP and encountered difficulties with the delivery of the placenta. She subsequently stopped following the CEP practices because of her one bad experience.

**CEP Content, Time Allocation and Teaching Methods**

The focus group discussions with trainees and trainers were very similar in their appraisal of the CEP regarding its content, time allocated to topics, and teaching methods. The trainees agreed that the CEP training is applicable to both their government and private work, or should be, in principal. Consistent with the post-training assessment of the CEP, many midwives reiterated the point that small group discussions were more helpful than the large group lectures. However, others pointed out that the large group presentations were necessary before breaking into smaller groups. Similarly, some said that they believed no major changes should be made to either the CEP’s content or schedule.
Now that they have had sufficient time to try to use this training, several repeated suggestions for improvements to CEP were made, these are as follows:

- More time should be allocated to postpartum hemorrhage; several felt that the time was too short to master new skills (this included some trainers as well).

- Some expressed the view that while the teaching methods CEP used were good, what is needed is practice – i.e., actual use of the CEP skills – and that practice should be part of the course to improve learning.

- Several thought that there should be more pictures used during the course of training and pictures should be distributed to trainees to help them review and remember the practices.

- Some thought that more time should be allocated to asking questions either in the large group presentations or in the small group activities, and that trainers should join the small groups so that questions could be asked.

In general, however, the focus group discussions suggested the same general sense of satisfaction with the content, organization, and teaching methods of the CEP that was also expressed in the post-training evaluation.

**Retaining CEP Training Information**

In response to the question of what would help the trainees to remember what they were taught by the CEP, virtually all agreed that a one-day refresher course would be very useful. Some suggested that this be done every six months, others said three months, one person suggested monthly! In the same vein, some suggested have periodic re-tests like the one conducted for this study to encourage them to review CEP materials. This enthusiasm should be tempered by the fact that workshops, courses, re-tests, etc. are opportunities to collect per diem and spend time away from daily work routines. On the other hand, if they genuinely feel that they need refresher courses for a training session that was only 2½ days long, this probably reflects the limited use many midwives are making of the CEP training in their daily work.

Others thought the lack of actual practice in the CEP was a major impediment to their remembering the information and skills that were presented. While their point is well taken and would also encourage more to use the practices taught, the feasibility of incorporating clinical practice into the CEP is questionable. Arranging for groups of 25 trainees to use the skills means making available sufficient numbers of women who are giving birth at the time of training – a tall order indeed. Even organizing for small groups of trainees to observe the use of CEP practices during a delivery could be a challenging logistical task in places where most women give birth at home.

While the repeated call for actual practice in the CEP is understandable, to some degree, this might reflect the fact that word about the LSS program and its clinically-based
training has spread rapidly. Midwives are very eager to be selected for the LSS and probably expect any future CEP training to adopt the actual practice element of LSS.

A very practical suggestion several midwives made was to distribute a set of pictures showing the use of CEP practices in addition to reading materials for review at home.

**Additional Training Topics**

During the focus group discussions, the midwives were asked what topics should be taught in subsequent CEP sessions. Some, quite honestly, said “anything related to being a midwife”, reflecting their keen interest in receiving more training and perhaps a sense that others know better what training they should receive. Midwives in all three provinces said that the CEP training should be provided to all midwives. More specific suggestions include the following topics:

- resuscitation of newborns, i.e., CPR
- the first and second stages of labor
- use of the partograph
- management of pre-eclampsia
- responding to other neo-natal problems

**What CMA Should Do for You**

CMA midwives pay R3,000 annually in membership dues, approximately US$0.79. This is a token contribution at best to supporting CMA operations; consequently, CMA depends heavily on external financial support, such as USAID’s funding to support their activities through RACHA. Nonetheless, R3,000 is meaningful to the individual midwives and they do expect to receive some benefit from belonging to CMA.

When asked what they think CMA should do for them, responses were uniformly positive regarding CMA. Some stated that they believed CMA was very helpful to them as practicing midwives. Several agreed that midwives who had not joined CMA earlier because they thought it would be a waste of money, e.g., CMA would not do anything useful for them, now regretted their decision, having missed the CEP. On this point, one group suggested that perhaps those midwives did not understand clearly the function and purpose of CMA.

While there is no reason to dismiss or discredit such positive feedback about CMA as mere politeness, obtaining comments that contain even a hint of criticism in such open fora as focus group discussions is unusual in Cambodia, unless very serious problems exist. That is very unlikely here; if serious dissatisfaction existed, it would probably have been expressed in one form or another in at least one of the six group discussions. However, individual interviews where anonymity can be assured would be a more appropriate means of learning midwives’ views of CMA’s helpfulness.

The most common expectation the midwives expressed was that CMA should conduct additional training for them. Clearly, they value training for its enhancement of their
professional skills, but they also appreciate its financial benefits and the break from the daily routine it offers.

Midwives from all three provinces expressed some rather odd perceptions about CMA as a provider of equipment and materials. They stated that CMA should help them by providing medical supplies directly to them – not to their facilities – because such materials are lacking in their workplace. This included “delivery sets”, aprons, gloves, autoclaves, eye glasses, boots, and vacuum extractors. This perception of CMA as a provider of material goods might have been created by CMA itself when it canvassed members about the availability of such supplies and equipment. As a result, expectations have been created that will not be met, and, as the group discussions indicate, this is something of a continuing problem.\(^6\)

\(^6\) Additional responses regarding CMA’s assistance to its members included the suggestion that CMA should fund English language training for midwives. Setting the stakes even higher, one trainer-midwife from Kampot thought that CMA should conduct study tours for its members to “other countries”. If this shows anything, it is that CMA’s midwives are indeed fast learners.
CONCLUSIONS: BLENDING OLD WITH NEW

Sometimes in studies like this, it's hard to communicate the environment in which a training activity such as CEP operates and what it confronts in Cambodia, given the country’s culture, history, and development problems. A standard reaction to current conditions, and particularly to human resource constraints, is to invest substantial time and money in training. In the relatively short time that foreign assistance has returned to Cambodia, training of every description has been funded by the various donors and development organizations active in the country. Certainly Cambodians who have participated in these activities have come to appreciate the various benefits of this near-mania for training. Yet increasingly, there is a growing awareness that perhaps some, or a lot, of this training is not accomplishing what was intended. It is very good, therefore, that studies like this are done to see what difference a training program like CEP is actually making.

To assess how effective CEP has been, it's important to appreciate the setting in which it operates. A very telling insight into what that environment is comes from the re-test and focus group discussions. Question #6 asks “Which of the following does not help the uterus to contract after delivery?” and the choices were: a) put the baby to the breast, b) rub up a contraction, c) place ice on the abdomen, and d) give oxytocine. Only nine percent – 6 out of 65 – of the midwives answered this question wrongly in the re-test. Yet in the discussion groups, midwives readily admitted they continue to put ice or a warm stone on the mother’s abdomen after labor to make the uterus and abdomen contract in size. They know it's not effective from a purely medical perspective, but they do it anyway. They either accept or are willing to accommodate the common belief that the woman will “have a big belly” when not pregnant if this practice is not followed. While accepting and even using CEP-taught procedures, the trainees and trainers continue to adhere to established beliefs and practices. In fact, those who are using CEP practices are also continuing to use other traditional practices for other parts of labor. In other words, they are covering all their bases by blending the old with the new.

The point of this story is to ask whether it is reasonable to expect one training program, no matter how well executed, to produce a sea-change in such behaviors among these midwives. By current local standards for training, CEP was well planned, designed, and conducted. Course content, training materials, the training of trainers, and implementation of the program all appear to have been jobs well done. The trainees and trainers continue to say that, for the most part, they are satisfied with the training, appreciated it, and want more. Yet many of the midwives now report that they have made limited or no use of CEP practices in their work. If that continues, they will soon loose much of whatever they gained from the training. What this decline reflects has much more to do with the use of the skills that were taught than with the program itself.

Some of the reasons for limited use of CEP practices were presented earlier. Most obvious are structural barriers – policies contrary to CEP practices, supervisors opposed to new practices because they do not understand them, job assignments where midwives do not attend deliveries. Less obvious, but very important, are cultural factors –
unwaving deference to the views of anyone of higher status and more advanced education, accommodation to common beliefs and practices of clients and colleagues even when one has medically sound knowledge to the contrary, and reluctance to be seen as standing out or challenging others by employing alternative, progressive practices.

In retrospect, CEP can be seen as trying to create a supply of better trained midwives, but overlooking the absence of a receptive “market” or environment where there is a demand for those skills. From this perspective, it is not too surprising that a significant percentage of CEP trainees report limited or no use of the new practices. The exception should have been Pursat where provincial health officials approve of the practices taught by CEP. Indeed, midwives from Pursat who are using their CEP training did not report the types of problems encountered by Siem Reap and Kampot midwives. However, the re-test results for Pursat show the largest decline in test scores – a 20 percent decrease in accuracy compared to the post-test. This suggests that many are not using CEP practices extensively, or they are using them wrongly. In other words, even in Pursat’s more supportive environment, there seems to be a problem with use.

Given the type of training CEP was – a fairly brief program intended to reach more than 150 midwives in a fairly short period of time – the results achieved are about what realistically should be expected in the current environment. But there is no reason to repeat the same type of training, nor make the same mistakes a second time. This is precisely what the new Life Saving Skills (LSS) program supported by RACHA is designed to avoid.

CEP served as a valuable source of lessons for designing the LSS. For example, CEP trained CMA midwives regardless of their job assignment. Consequently, midwives working in a hospital pharmacy or the pediatrics ward cannot possibly use these skills in their government job. Others assigned to health centers attend few, if any, births and have no private practice, limiting their opportunities to use the training. The trainers for CEP themselves were not all assigned to jobs where they could use the CEP practices. Some of the trainers were also questionable choices for the job – some were too young and inexperienced to be effective trainers for older, more experienced midwives. Perhaps the most serious weakness in CEP from the perspective of the midwives was the lack of actual use of the CEP practices during the program.

LSS has been designed as a two week clinically-based, skills-upgrading program that subsumes the topics of CEP within a much more comprehensive curriculum. A training facility was specifically upgraded for use by the LSS program. Trainees are screened and selected only if they are active midwives in jobs where they can use the LSS training. LSS trainers were carefully selected and well prepared; they have considerable practical experience. Perhaps most important, LSS is a competency-based program – trainees must demonstrate satisfactory use of LSS skills in actual deliveries to be certified as having completed the program.

While initially focused on Pursat, LSS will expand to train midwives from Siem Reap and Kampot beginning next year. A second training facility possibly in Kampot is now
being considered. Health officials in these two provinces will soon be contacted about the need to revise policies that prevent extensive use of the practices first taught by CEP and now advanced by LSS. Thought is also being given to how the midwives’ supervisors—doctors, medical assistants, health center directors—can be enlightened about the soundness of the practices taught by the LSS to remove this impediment as well. Things are changing for the better and factors that undercut training programs like CEP are being addressed.

The real challenge for expanding the services of midwives lies ahead. Not until the health-seeking behaviors of rural women change significantly—that they understand and want the services of skilled midwives for their pregnancies and deliveries—will the “market demand” side of the equation be in place. When that happens, the progressive practices taught by programs such as CEP and LSS will become the prevailing standard for Cambodian women.
ANNEX A

Trainees’ Test and Focus Group Discussion Guidelines

Test Questions (correct answer are highlighted)

1. **What is the third stage of labor?**
   a. The third stage of labor is from when the placenta separates from the uterus until the placenta and membranes are completely expelled.
   b. The third stage of labor is from when the baby is born until the placenta is expelled completely.
   c. The third stage of labor begins when the placenta and membranes come out from the vagina completely and ends one hour later.
   d. The third stage of labor begins when the baby is born and ends when the placenta and membranes are completely expelled.

2. **How long does the third stage of labor normally last?**
   a. The third stage of labor normally lasts from 2-10 minutes, but may last up to 30 minutes.
   b. The third stage of labor normally lasts from 10-20 minutes, but may last up to 3 hours.
   c. The third stage of labor normally lasts from 5-15 minutes, but may last up to 1 hour.
   d. The third stage of labor normally lasts from 2-3 minutes, but may last up to 20 minutes.

3. **What is the normal third stage of labor?**
   a. The placenta and membranes are expelled completely within one hour of the birth of the baby and there is no postpartum hemorrhage
   b. The placenta is expelled completely within the correct time and there is no postpartum hemorrhage or infection.
   c. The placenta and membranes are expelled completely and there is no hemorrhage or infection.
   d. The placenta is expelled completely within one hour of the birth of the baby.

4. **How long does oxytocine take to act when given intra-muscularly?**
   a. 1 minute
   b. 2.5 minutes
   c. 3.5 minutes
   d. 4.5 minutes

5. **How much blood can a woman lose per minute due to postpartum hemorrhage?**
   a. 250 ml
   b. 500 ml
   c. 750 ml
   d. 300 ml
6. Which of the following does not help the uterus to contract after delivery?
   a. Put the baby to the breast
   b. Rub up a contraction
   c. Place ice on the abdomen
   d. Give oxytocine

7. What is the definition of a postpartum hemorrhage in a healthy woman?
   a. 300 ml or more
   b. 500 ml or more
   c. 700 ml or more
   d. 900 ml or more

8. In the third stage of labor, when we see lengthening of the cord at the vagina, what is it a sign of?
   a. The placenta has separated from the uterine wall.
   b. There is no urine in the bladder
   c. The uterus well contracted
   d. All of the above

9. When a woman goes into “shock” during postpartum hemorrhage, what signs may be seen?
   a. High fever, rapid pulse, low blood pressure
   b. Sweating, low temperature, high blood pressure
   c. Slow respiration, slow pulse, low blood pressure
   d. Low blood pressure, rapid pulse, sweating

10. When delivering the placenta by controlled cord traction, what should the midwife do?
    a. Wait for a contraction, do controlled cord traction and then give Syntocin 10 units i.m.
    b. Wait for a contraction, give Syntocin 10 units i.m., then do controlled cord traction.
    c. Give Syntocin 10 units i.m., wait for a contraction, and then do controlled cord traction.
    d. Wait for a contraction, do controlled cord traction and then give Syntocin 10 units i.m. only if there is a sign of hemorrhage.

11. Which one of the following practices should be discouraged as it can cause postpartum hemorrhage?
    a. Internal manual examination of the uterus for placenta tissue or clots.
    b. Waiting up to 10 minutes for a uterine contraction after the birth.
    c. Testing for separation of the placenta by pressing above the symphysis pubis for cord retraction.
    d. Placing ice on the abdomen after delivery of the placenta
12. A woman has a postpartum hemorrhage after delivery of the placenta. What is the first thing a midwife should do?

a. Examine the placenta and membranes again.
b. Inspect the vagina and cervix for any tears.
c. Give an I.V. infusion with 40 units of Syntocin

d. Rub a contraction and expel blood clots.

Guidelines for Trainees’ Focus Group Discussion

- Have you had any opportunities to use the skills you learned in the Continuing Education course – 3rd Stage of Labor and Postpartum Hemorrhage:
  - In your government job?
  - In your private practice?
- If yes, how many times have you used these skills? In your government job? In your private practice?
- Which of these skills do you use the most? Which do you use the least? In your government job? In your private practice?
- What reasons do you think account for why you do not have more opportunities to use these skills more often?
- Have you discussed this course with any of the other trainees who attended it? Are they using the skills taught in the course? A little, some, or a lot? If they are not using these skills very much, have they told you why not?
- What additional topics do you think should have been covered in this course? What should have been given more emphasis or time in the course? What should have received less emphasis or time?
- Can you think of things that could have been done better in preparing for the course? In conducting the course? What changes would you recommend?
- What did you think of the training methods? Did you find the group activities more or less helpful than the presentations by the teachers? Do you think there should be more time given to group activities? To presentations by the teachers? By presentations by guest speakers?
- Do you think that more pictures of procedures and actions are needed or would be useful?
- What would help to remember what you learned from this course? Printed materials reviewing lessons and main points? A brief, one-day refresher course?
- What do you think should be the topic of the next Continuing Education course CMA sponsors?
- Is CMA very helpful to you as a practicing midwife? If yes, in what ways? If not, why not? What do you think CMA could do to help its midwives more?
ANNEX B

Trainers’ Test and Focus Group Guidelines

Test Questions  (correct answers are highlighted)

1. One of the roles of the teacher is to motivate participants to learn. Which of the following will best motivate students?
   a. Correcting mistakes as soon as they are made
   b. Giving work to do at home frequently
   c. Informing participants when they have done well
   d. Telling participants that what you are teaching is important

2. A good teacher will teach participants
   a. What participants need to know in order to do their job
   b. Everything the teacher knows about the job.
   c. Everything the textbook says about the job.
   d. Only what the participant wants to learn about the job.

3. Which of the following takes the longest time to learn?
   a. Clinical skills
   b. Knowledge
   c. Attitudes
   d. Communication skills

4. Which of the following teaching methods is “student centered”?
   a. Demonstration
   b. Lecture
   c. Video/discussion
   d. Small group discussion

5. The main purpose of checklists is to:
   a. Tell the teacher what the student can/cannot do well
   b. Help the student improve their skill.
   c. Measure the skill of the students against a set standard.
   d. Measure the effectiveness of the teacher’s teaching

6. Lesson objectives describe:
   a. What the teacher must teach.
   b. What the student must learn.
   c. What the teacher must evaluate.
   d. What the student must be able to do.
7. How much a participant will learn depends mainly on:
   a. The learner
   b. The teacher
   c. The curriculum
   d. The handouts

8. You are a group animator and one group member talks all the time. What is the best way to manage the situation?
   a. Allow her to continue but at the break take her aside and ask her to listen to what others in the group are saying.
   b. Suggest she has had her opportunity to speak so she should say no more.
   c. Ask her to allow other participants to make a contribution to the discussion.
   d. Thank her for her comment and ask another participant if they agree with her.

Guidelines for Trainers’ Focus Group Discussion
- Have you had any opportunities to use the skills you taught in the Continuing Education course – 3rd Stage of Labor and Postpartum Hemorrhage:
  - In your government job?
  - In your private practice?
- If yes, how many times have you used these skills? In your government job? In your private practice?
- Which of these skills do you use the least? Which do you use the most? In your government job? In your private practice?
- What reasons do you think account for why you do not have more opportunities to use these skills more often?
- Have you discussed this course with any of the trainees since it was conducted? Are they using the skills taught in the course? A little, some, or a lot? If they are not using these skills very much, have they told you why not?
- What additional topics do you think should have been covered in this course? What should have been given more emphasis or time in the course? What should have received less emphasis or time?
- Can you think of things that could have been done better in preparing for the course? In conducting the course? What changes would you recommend?
- Since conducting this course, have you had any opportunities to use your skills and experience as a trainer for other training activities? If so, what were these activities? Who sponsored them?
- What do you think should be done to help to retain and improve your training skills?
- What do you think should be the topic of the next Continuing Education course CMA sponsors?
- Is CMA very helpful to you as a practicing midwife? If yes, in what ways? If not, why not? What do you think CMA could do to help its midwives more?
ANNEX C

Summary of Results from the Trainers’ Re-test and Focus Group Discussions

Test Results
Ten trainers participated in the re-test of their training skills – four from Pursat, four from Kampot and two from Siem Reap. The eight questions in the re-test were from the pre- and post-tests for the training of trainers activity. The following table presents a comparison of pre-, post- and re-test scores.7

Results of Trainers Tests

<table>
<thead>
<tr>
<th>Test Scores:</th>
<th>Siem Reap</th>
<th>Kampot</th>
<th>Pursat</th>
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<tbody>
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<tr>
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<td>7</td>
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<tr>
<td>Post-test</td>
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<tr>
<td>- lowest score</td>
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<td>6</td>
<td>7</td>
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<tr>
<td>- average score</td>
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<td>6.8</td>
<td>7.3</td>
</tr>
<tr>
<td>Re-test</td>
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<tr>
<td>- lowest score</td>
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<td>6</td>
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</tr>
<tr>
<td>- average score</td>
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<tr>
<td>Change in average pre-test to post-test scores:</td>
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<tr>
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</table>

These scores are based on only ten trainers, so they should be used very conservatively. The results show substantial improvements from pre- to post-test, with increases in scores ranging from 38 to 67 percent and average scores were fairly high. Overall, the increase in scores from pre- to post-test was a gain of 73%.

The re-test results suggest a decline in knowledge retention. The biggest loss occurs in Siem Reap, but these scores are based on only two of the four trainers from that province. Despite initial gains from the training, the knowledge levels of these two individuals now

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7 These results are base on the same 10 trainers who took the re-test. The initial training session these trainers attended included 15 participants. Because of some misunderstanding, only the first 8 questions (i.e., #1-#8) from the 12 used for the pre- and post-tests were used in the re-test. Pre- and post-test results reported in the table are base on the same 8 questions asked in the re-test.
appear to be slightly worse than when they took the pre-test prior to training. Pre-test to re-test scores indicate that trainers from Kampot and, to a lesser degree, Pursat have retained knowledge from the training program. Overall, a 41% improvement in scores occurred between pre- and re-tests. However, re-test results indicate a decline of 18% in scores across the three provinces, with Siem Reap trainers showing the greatest loss of 47 percent.

Regarding response to individual questions, the results were as follows:

Questions #3 and #4.......100% correct
Questions #2 and #5.......90% correct
Questions #1 and #7.......80% correct
Question #8....................20% correct
Question #6......................0 correct

Question #8, which is “You are a group animator and one group member talks all the time. What is the best way to manage the situation?” was problematic for the trainers. Only two of the ten trainers selected the correct response – thank her for her comment and ask another participant is they agree with her. None of the ten trainers answered Question #6 – “Lesson objectives describe….” correctly - “what the student must be able to do”. Why these two particular questions were so problematic for the trainers remains to be seen. The failure to know how to manage overly talkative participants is probably the more important of the two weaknesses. This suggests more attention needs to be given to developing this useful skill among the trainers.

**Focus Group Discussions**

For the most part, the trainers responded the same as the trainees to questions about their use of CEP practices, and course the content. Regarding their preparations for the course, the trainers from Siem Reap thought that more time was needed and the number of trainees in each session was too large. Trainers from Kampot said that their training would have been better if they had the opportunity to use the practices during the training of trainers activity prior to conduct the sessions. As it was, they were presenting practices and skills that they had never actually used. This is true for the other trainers as well. One Kampot had an excellent idea of conducting the training of trainers on-the-job where they work so that they could first use what they would later present.

Regarding training activities since the CEP, the four trainers in Kampot had not led any other training activity since the completion of CEP. One trainer from Siem Reap reported the same, while another had lead training sponsored by Medecins Sans Frontieres. Of the four trainers from Pursat, two had not conducted additional training, and two had lead training for TBAs sponsored by Seila (the local government development program sponsored by UNDP/CAREERE). As with any other set of skills, those who are not periodically using the training skills and techniques that were taught in preparation for CEP will gradually forget them. This might account for the decline in re-test scores.