RACHA’s TBA Project

Part I

Rationale

Cambodia still bears the scars of two decades of civil war and internal strife. Although the country has achieved significant advancements in the health sector, maternal and infant mortality are still amongst the highest in the region.

A large number of midwives have been trained in the last decade, but rural areas still experience acute shortages of qualified health personnel, since urban health staffs are not motivated to work in unknown and poor rural locations. Therefore the role of the Traditional Birth Attendant (TBA) is still of great importance. TBAs deliver 66% of all babies in Cambodia and from 69% to 87% in RACHA’s focus provinces. They also perform 7% of ante natal care and 34% of post natal care.\(^1\)

TBAs live in the same communities where they work. They usually hold positions of authority and respect amongst the local population. They are likely to have:

- Established relationships of trust with their clients;
- Perceived skills;
- Low cost of services and credit if necessary; and always important in rural Cambodia;
- Geographical proximity.

Because of their status in the community TBAs are well placed to provide advice and basic health education. If they receive training to enhance their practices and encourage referrals to government health facilities, it will have a positive impact on the reproductive health situation in their home communities.

The argument is frequently made these days that training and support of TBAs has not reduced maternal mortality rates worldwide. However, the use of maternal mortality rates as a single indicator for impact may not deliver an accurate picture in rural Cambodia. Determining in a focal area such as rural Cambodia what the rates are is very difficult as extremely large numbers of births need to be monitored before a rise or fall can be demonstrated. If morbidity instead of mortality were adopted as an indicator, it also poses problems because the majority of illnesses remain unrecorded. Even infant mortality as an indicator is doubtful, since Cambodian TBAs tend to be vague in differentiating between still births and neo natal deaths.

It is possible to determine some TBA outputs on a smaller scale, such as monitoring the number of appropriate referrals and the number of deliveries that TBAs perform in collaboration with a trained midwife. The latter will shed light on the level of community links between TBAs and government health facilities.

\(^1\) *Cambodia Demographic and Health survey 200*, pp.141-145.
However, as long as essential emergency services remain absent or inaccessible neither TBAs nor rural midwives will be able to achieve significant improvements of care in critical obstetric situations.

RACHA has decided to provide basic training and support for TBAs, as an essential transitional measure, until a sufficient number of trained midwives is available to provide more appropriate Safe Motherhood services in rural Cambodia, for the following reasons:

1. Since the large majority of babies are delivered by TBAs their contribution as traditional practitioners cannot be ignored. The quality of their basic delivery practices needs to be enhanced, for the benefit of their clients.
2. TBAs can play a key role in linking their community with the government health system. With training on danger signs in pregnancy, labour and post-partum TBAs are in a position to make appropriate referrals that are potentially life saving.
3. As respected village members TBAs have the potential to act as credible health educators on reproductive health issues, such as breast feeding, nutrition for pregnant and lactation mothers, anemia prevention and HIV/AIDS prevention; and
4. TBAs are recognized with the Safe Motherhood Guidelines of MoH as very important health providers in rural Cambodia.

RACHA’s Safe Motherhood program of training rural midwives in basic life saving skills (LSS) has achieved improved standards of obstetric practice at health center- and Operational District hospital levels in the target areas. It is therefore a logical step for the project to reach further out into local communities, where babies are being born, in order to achieve effective collaboration in the reproductive health sector.

Objectives

RACHA proposes the following objectives for TBA activities:

1. Effective links between qualified midwives and TBAs established and maintained in the target areas.
2. Improved knowledge and practice by TBAs of clean delivery methods and prompt referral on danger signs in pregnancy, labour and post partum.

The Target Areas

Kampot’s Operational District Angkor Chey was selected as target area for a TBA transition program because RACHA is well established there and LSS-trained midwives can be found in the OD hospital as well as almost all health centers. Approval and the promise of collaboration were assured by representatives of provincial MCH and Angkor Chey OD. If the transition program proves successful it will be replicated in Kralanh OD of Siem Reap province.
TBA Survey

In preparation for the TBA transition program a survey was conducted for 58 TBAs in Angkor Chey, to assess their knowledge, practices and suitability for training. The complete survey results are found in Part II. The survey revealed that almost one in five TBAs had not received any training at all. Over half of them stated that they had never visited their nearest health center and those who did make referrals did so only infrequently. Almost half of the respondents said that they did not know how to deal with post partum hemorrhage while misconceptions with regard to good nutrition in pregnancy and the post partum period abounded. Almost every TBA requested training by RACHA/MoH.

The survey provides relevant information on subjects to be addressed during TBA training, for instance links between health centers and the community, referrals, nutrition and hygienic deliveries.

Implementation modality

After having obtained approval from MoH for the newly developed curriculum, six-day training workshops will be implemented for 8-12 TBAs in their own communes or near by. The training will be shared between LSS-trained health center midwives, a health professional from the OD and RACHA’s TBA Team Leader. It is envisioned that the training inputs by RACHA’s representative will diminish gradually as more workshops are being undertaken until government staff implement this alone. Two pre-workshops of two days will precede the training, for training of trainers.

Health center midwives, in collaboration with RACHA, will also implement continuing education and follow-up with decreasing responsibility by RACHA over time.

Training Content and Methods

The training curriculum focuses on danger signs during pregnancy, labour and post partum, with emphasis on referrals. It also addresses referrals for antenatal care, clean normal deliveries, basic hygiene, nutrition and postnatal care. This course covers not only the subjects that are recommended by MOH for TBA training, but also adds two new activities that are designed to strengthen the links between TBAs and government health professionals: Two visits are planned, to the OD hospital and the nearest health center. Here the TBAs will be able to observe all sectors of health care and talk with the staff. This should be a step towards eradicating mutual misconceptions and prejudices, so that TBAs will in the future overcome their reluctance to make referrals for fear of being blamed or ridiculed.

The training methods take into consideration the fact that 75% of TBAs had said in the survey that they are illiterate or semi-literate. The focus will be on role plays, games, discussion, group work, demonstrations and repetition of the most important messages. Handouts will be mainly pictorial. The TBAs will take a simple verbal pre-and post test and receive a certificate on successful course completion.
Instead of receiving a simple delivery kit TBAs will be encouraged to use the “home birth kits” for clean deliveries that are being sold to pregnant women at a small profit for the TBAs.

**Follow up**

Appropriate follow-up is essential for TBAs since they collaborate with government staff on a voluntary basis and require ongoing support. This will also provide an opportunity for health center midwives and TBAs to get to know and trust one another better, for the benefit of village communities.

One month after the initial training the TBAs will meet for a day, for continuing education and revision of key training points. Then regular meetings of this kind are planned at intervals of two to three months.

Individual follow-up visits to TBAs’ home villages will be conducted every three to six months, depending on each TBA’s need for more intensive support.

Trained TBAs will be requested to complete a simple pictorial data sheet on their activities and health center midwives will compile a summary of the findings for evaluation.

**Conclusion**

As this transition program is being carried out it will no doubt undergo changes for improvement. RACHA and MoH implementers will continue their dialogue to obtain optimal results. In order to overcome ongoing problems of timely referrals for women with obstetric danger signs, further community interventions may be required, with regard to adequate and affordable local transportation. This step will be considered in detail once the TBAs have been trained and their active inputs in such community activities can be assured.
Part II

TBA Survey in Angkor Chey Operational District, Kampot

13-26 October 2001

1. Background

The objective of the survey was to assess knowledge, practices and suitability for training of TBAs in the target area. The questionnaire included questions on TBA’s age, previous training, number of deliveries, collaboration with health centers, delivery practices, hygiene, nutrition, breast feeding and willingness to participate in training (see attached questionnaire).

Nine health center midwives were interviewers, with two supervisors (one from RACHA and one from provincial MCH). In preparation for the survey the interviewers received training, with practice, in interview techniques and the use of the questionnaire.

The survey’s field work took place from 13 to 26 October in 14 communes of Angkor Chey Operational District and 58 TBAs were interviewed in their homes.

2. Summary of Main Survey Results

The present average age of surveyed TBAs is 58 while their average age at the beginning of their career was 31, ranging from 17 to 61. The fact that the youngest TBA interviewed now is 41, in comparison to 17 at the time when they were trained, is an indication that young women nowadays do not wish to become TBAs.

Almost one in five respondents (19%) had no training at all or were trained by a relative while more than half (55%) of the remainder were trained by another TBA. A surprisingly high number of 24 (41%) said that they had received training by another organization, but that included the Pol Pot regime and many TBAs could not remember the training organization’s name.

The TBAs stated that they deliver an average of two babies per month, or 20 per year. Although almost all said that they had met obstetric complications only 54% made referrals for complications.

Over half of respondents said that they never visit their nearest health center. Those who make referrals to health centers did so only 1.8 times on average in six months. These results are significant, indicating that the link between TBAs and health center services is weak, particularly since the average distance between village and health center should not be a barrier at 2.5km. 45% of respondents said that transport is a problem with regard to referrals and that it was expensive.

The large majority (91%) stated that they visit women antenatally and advise them to make basic preparations for home deliveries. Ninety one percent stated that they have delivery kits, including RACHA’s disposable home birth kits. The use of home birth kits by over half of the respondents (51%) appears to have changed delivery modes.
significantly, particularly since this abolishes the need of sterilization of instruments. The most frequently used mode of cord-cutting is now by blade, mostly taken from home birth kits.

With regard to TBA actions in case of post partum hemorrhage almost half of respondents (42%) said that they did not know what to do. The same number said that they refer these patients while a few other actions were also listed. As for medication in pregnancy, labour and post partum the majority of respondents advised Khmer medicine, though injections and IV fluids were also mentioned.

The questions on breast feeding showed unexpectedly high knowledge levels, which may have resulted from recent breast feeding training in the target communes by RACHA. Over half of the TBAs (55%) stated that breast feeding should be commenced “very soon” or within one hour after birth. Twenty six percent knew that no additional nutrition was needed for a breast feeding baby in the first six months and 36% said that breast feeding should continue for at least two years.

With regard to nutrition in pregnancy, labour and post partum it became apparent that many rules exist and that these are very different for pregnancy than for post partum. In pregnancy vegetables and fruit are recommended; these foods are discouraged in the post partum period. In the post partum period meat, salty food and peppy food are considered beneficial, while such highly seasoned foods are discouraged in pregnancy.

All TBAs said that they are being paid for their services and most received both money and goods.

The large majority (90%) of respondents wish to be trained and attend follow-up meetings. Seventy six percent said that they are either illiterate or semi-literate.

An analysis of the replies to technical questions revealed that the TBAs had given an average of 34 % of correct replies, ranging from 11% to 58%

3. Survey Results in Detail

Age

The average age of respondents was 57.6, ranging from 41 to 79. This confirms the present general perception that TBAs are usually middle aged or old women who have already born children.

Question 1: How old were you when you became a TBA?

The average age was 31 years, ranging from 17 to 61. The large majority (78%) was aged between 20 and 40 years, when they began their work as TBAs. This is in contrast to the previous finding to some extent, since no TBAs younger than 41 are presently practicing. It may indicate that younger women nowadays do not decide to become TBAs.
### Quality and Services

#### Age Groups

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 or less</td>
<td>1</td>
</tr>
<tr>
<td>20-29</td>
<td>25</td>
</tr>
<tr>
<td>30-39</td>
<td>20</td>
</tr>
<tr>
<td>40-49</td>
<td>11</td>
</tr>
<tr>
<td>60 and over</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Question 2: Who taught you to become a TBA?

Almost half of the respondents said that another TBA taught them, while the next largest group of respondents stated they were taught by a midwife. Almost one fifth (19%) had not had any training or were trained by a relative or stated that they were trained “in a dream”.

<table>
<thead>
<tr>
<th>Trainer</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBA</td>
<td>27</td>
</tr>
<tr>
<td>Midwife</td>
<td>19</td>
</tr>
<tr>
<td>“In a dream”</td>
<td>7</td>
</tr>
<tr>
<td>relative</td>
<td>2</td>
</tr>
<tr>
<td>nobody</td>
<td>2</td>
</tr>
<tr>
<td>Traditional healer</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Question 3: How long have you been taught?

An equal number of respondents had received training of 1-5 months or one or more years. Many TBAs say that this training mainly consisted of accompanying an experienced person to women giving birth.

<table>
<thead>
<tr>
<th>Training Duration</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year or more</td>
<td>16</td>
</tr>
<tr>
<td>5 months – 1 year</td>
<td>16</td>
</tr>
<tr>
<td>1 – 5 months</td>
<td>7</td>
</tr>
<tr>
<td>Less than 1 month</td>
<td>10</td>
</tr>
<tr>
<td>No training or dream</td>
<td>9</td>
</tr>
</tbody>
</table>
Question 4: Have you been trained by an organization? If yes, by which one?

Forty one percent of respondents said that they had been trained by an organization, but many could not remember its name.

Yes: 24  
No: 34

<table>
<thead>
<tr>
<th>Organization</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memisa</td>
<td>6</td>
</tr>
<tr>
<td>Pol Pot govt</td>
<td>4</td>
</tr>
<tr>
<td>GTZ</td>
<td>2</td>
</tr>
<tr>
<td>Present govt</td>
<td>2</td>
</tr>
<tr>
<td>Can’t remember</td>
<td>10</td>
</tr>
</tbody>
</table>

Question 5: How many babies did you deliver this month?

On average the respondents stated that they had conducted two deliveries during the last month before the interview. Over half of them (55%) delivered 1-2 babies.

<table>
<thead>
<tr>
<th>Number of Deliveries</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>9</td>
</tr>
<tr>
<td>1-2</td>
<td>32</td>
</tr>
<tr>
<td>3-4</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

Average: 2 deliveries per TBA per month, range 0 - 5

Question 6: How many babies did you deliver during the last year?

Five respondents could not remember how many they had delivered. The average number of deliveries last year of the remaining 53 TBAs was 20.

<table>
<thead>
<tr>
<th>Number of deliveries</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>4</td>
</tr>
<tr>
<td>1-9</td>
<td>9</td>
</tr>
<tr>
<td>10-19</td>
<td>13</td>
</tr>
<tr>
<td>20-29</td>
<td>15</td>
</tr>
<tr>
<td>30-39</td>
<td>8</td>
</tr>
<tr>
<td>40 or more</td>
<td>4</td>
</tr>
<tr>
<td>Can’t remember</td>
<td>5</td>
</tr>
</tbody>
</table>

Average: 20 deliveries per year, of those who remember, range from 0 to 60.
Question 7: Have you met complications during deliveries? If yes, what were they? How did you manage these complications?

The large majority of respondents (86%) stated that they had encountered obstetric complications in their work. The most commonly mentioned problems were retained placenta and post partum hemorrhage, while a number of other complications were mentioned once only.

<table>
<thead>
<tr>
<th>Complication</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained placenta or membranes</td>
<td>28</td>
</tr>
<tr>
<td>Post partum hemorrhage</td>
<td>21</td>
</tr>
<tr>
<td>Breech</td>
<td>8</td>
</tr>
<tr>
<td>Intra partum hemorrhage</td>
<td>4</td>
</tr>
<tr>
<td>Twin</td>
<td>2</td>
</tr>
<tr>
<td>Arm presentation</td>
<td>2</td>
</tr>
</tbody>
</table>

Single respondents mentioned the following: urinary retention, oedema, eclamptic fit, diarrhoea in labour, hypertension, placenta praevia, molar pregnancy, face presentation.

The TBAs cited several ways of responding to complications, depending on the nature of the conditions. Referral to a health facility (not necessarily a health center, but also OD hospitals) and care in the woman’s home by the TBA were most often mentioned.

<table>
<thead>
<tr>
<th>Ways of Responding to Complications</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refer to health facility</td>
<td>27</td>
</tr>
<tr>
<td>Treatment by TBA at woman’s home</td>
<td>25</td>
</tr>
<tr>
<td>Call midwife to home</td>
<td>9</td>
</tr>
<tr>
<td>Call senior TBA to home</td>
<td>2</td>
</tr>
</tbody>
</table>

Question 8: Do you sometimes go to the nearest health center in your community? If yes, for what reasons do you go?

The majority of respondents (57%) said that they never go to their nearest health center. Those who make visits do so mainly for making referrals of clients and for sickness in the family. Some respondents gave several reasons. Those who attend meetings at health centers are members of a Feedback Committee.

Yes: 25
No: 33
Question 9: How far is the health center from your village?

Ten TBAs said that they did not know. The average distance for those who did know was 2.4 km, ranging from 300m to 5km.

Question 10: Do you refer your women clients sometimes to the health center? If yes, how many times in the last six months? For what problems do you usually refer?

The majority of respondents (57%) said that they do not refer any clients to the health center. Of the 25 TBAs who said that they did refer clients, they did so on average 1.8 times in the last six months.

Yes: 25
No: 33

Average referrals in last 6 months: 1.8 times, ranging from 0 to 5.

The main reasons for referrals were cited as for ante natal care (9), prolonged labour (4), family planning (3), post partum hemorrhage (2). The following were cited only once: abortion, urinary retention, retained placenta, stillbirth, convulsion.

Question 11: If you refer a woman in labour to a government health facility, what transport is used?

Most respondents cited several means of transport, according to distance and availability. Motorbikes or hammoks were most often mentioned.

<table>
<thead>
<tr>
<th>Means of Transport</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motorbike</td>
<td>17</td>
</tr>
<tr>
<td>Hammok</td>
<td>16</td>
</tr>
<tr>
<td>Horse cart</td>
<td>11</td>
</tr>
<tr>
<td>Remok</td>
<td>6</td>
</tr>
<tr>
<td>Car</td>
<td>5</td>
</tr>
<tr>
<td>Truck</td>
<td>3</td>
</tr>
<tr>
<td>Walking</td>
<td>3</td>
</tr>
</tbody>
</table>
Quality and Services


The largest number of respondents said that transport is a problem for referrals though many did not know because they do not make referrals.

Yes: 26
No: 17
Don’t know: 15

Of the 26 who responded in the affirmative, 10 said that it is difficult to find people to help, 8 stated that this is difficult only at night and 8 cited high cost as the main problem.

Of the 17 who said that transport poses no problems, 6 mentioned as reasons that the health facility is near, 5 that transport is the family’s responsibility only, 4 that the TBA knows where to get help and 2 that the TBA uses her family’s own vehicle.

In response to the question: “is transport expensive?” most respondents said that they did not know. Of the 17 who said that they did know, most estimated the price between 3000 and 10 000 Riel ($0.75 to $2.5).

Yes: 17
No: 8
Don’t know: 33

<table>
<thead>
<tr>
<th>Estimated Transport cost</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000 – 10 000</td>
<td>10</td>
</tr>
<tr>
<td>10 000 – 20 000</td>
<td>4</td>
</tr>
<tr>
<td>40 000</td>
<td>2</td>
</tr>
<tr>
<td>100 000</td>
<td>1</td>
</tr>
</tbody>
</table>

Question 13: Do you usually care for a woman while she is pregnant? If yes, what do you do?

The large majority of respondents (91%) said that they provide care for pregnant women. All of those stated that they palpate the uterus to find out whether the baby lies in the correct presentation. A few said that they refer the woman if they find an abnormal fetal presentation.

Yes: 53
No: 5
### TBA Actions in Pregnancy

<table>
<thead>
<tr>
<th>Action</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palpate abdomen</td>
<td>53</td>
</tr>
<tr>
<td>If abnormalities, refer</td>
<td>3</td>
</tr>
<tr>
<td>Take blood pressure</td>
<td>2</td>
</tr>
<tr>
<td>Give injection</td>
<td>1</td>
</tr>
</tbody>
</table>

**Question 14:** Do you ask a pregnant woman to make preparations in the house for the birth? If yes, please describe.

Ninety percent of respondents said that they did advise their pregnant clients to prepare for their home deliveries. All of them asked them to prepare a clean place for the delivery in the house.

Yes: 52  
No: 6

### Preparations for Delivery

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare a clean place</td>
<td>52</td>
</tr>
<tr>
<td>Prepare clean clothes</td>
<td>25</td>
</tr>
<tr>
<td>Have charcoal ready</td>
<td>8</td>
</tr>
<tr>
<td>Take a bath before delivery</td>
<td>5</td>
</tr>
</tbody>
</table>

**Question 15:** Do you bring any things with you when you go to a woman in labour? If yes, what are they?

The large majority of respondents (90%) said that they take some things with them. A variety of items was mentioned.

Yes: 52  
No: 6

### Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of TBAs</th>
<th>Item</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scissors</td>
<td>28</td>
<td>Injection materials</td>
<td>4</td>
</tr>
<tr>
<td>Cord tape</td>
<td>27</td>
<td>Spygmomanometer</td>
<td>3</td>
</tr>
<tr>
<td>Home birth kit</td>
<td>27</td>
<td>Medicines</td>
<td>2</td>
</tr>
<tr>
<td>Forceps</td>
<td>17</td>
<td>Soap</td>
<td>2</td>
</tr>
<tr>
<td>Instrument box</td>
<td>14</td>
<td>IV sets</td>
<td>2</td>
</tr>
<tr>
<td>Mucous extractor</td>
<td>8</td>
<td>Hand brush</td>
<td>2</td>
</tr>
<tr>
<td>Gloves</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Question 16: Do you have a delivery kit? If yes, may I see it? How do you clean it?

The large majority (90%) said that they had delivery kits, but these included the RACHA home birth kits that are only used once for each delivery.

On viewing the kits the interviewers noticed that many of the forceps and scissors were old or broken. A number of TBAs said that they now usually use the disposable home birth kits, but still take forceps and scissors with them for use when the umbilical cord is tightly around the baby’s neck.

Yes: 52
No: 6

<table>
<thead>
<tr>
<th>Items seen</th>
<th>Number of TBAs</th>
<th>Items seen</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scissors</td>
<td>33</td>
<td>Mucous extractor</td>
<td>12</td>
</tr>
<tr>
<td>Forceps (some broken)</td>
<td>28</td>
<td>Blades</td>
<td>8</td>
</tr>
<tr>
<td>Home birth kits</td>
<td>27</td>
<td>Sphygmomanometer</td>
<td>4</td>
</tr>
<tr>
<td>Cord tape</td>
<td>21</td>
<td>Gloves</td>
<td>2</td>
</tr>
<tr>
<td>Instrument box</td>
<td>16</td>
<td>Urinary catheter</td>
<td>2</td>
</tr>
</tbody>
</table>

With regard to cleaning or sterilizing their instruments a number of methods is used. Those respondents who use RACHA’s home birth kit said that they use a new one for each delivery, so cleaning was not applicable.

<table>
<thead>
<tr>
<th>Method</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throw away. (home birth kits)</td>
<td>27</td>
</tr>
<tr>
<td>Wash with soap and boil</td>
<td>15</td>
</tr>
<tr>
<td>Dip into hot water</td>
<td>9</td>
</tr>
<tr>
<td>Wipe with or immerse in wine</td>
<td>5</td>
</tr>
<tr>
<td>Use surgical alcohol</td>
<td>5</td>
</tr>
<tr>
<td>Use steam</td>
<td>2</td>
</tr>
</tbody>
</table>

Question 17: What do you usually use to cut the baby’s cord?

Forty two respondents (72%) stated that they use a blade, either from the home birth kit, or provided by the family or bought by the respondent. Thirteen respondents said that they use scissors, two use bamboo and one uses a knife.

Question 18: if a woman bleeds too much after delivery, what do you do?

Most respondents cited several actions. 17 (42%) said they did not know how to act and the same number said that they would refer to a health facility.
<table>
<thead>
<tr>
<th>Action</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t know</td>
<td>17</td>
</tr>
<tr>
<td>Refer</td>
<td>17</td>
</tr>
<tr>
<td>Massage uterus</td>
<td>14</td>
</tr>
<tr>
<td>Give Khmer medicine</td>
<td>6</td>
</tr>
<tr>
<td>Stimulate nipples</td>
<td>6</td>
</tr>
<tr>
<td>Injection</td>
<td>4</td>
</tr>
<tr>
<td>External bimanual compression</td>
<td>3</td>
</tr>
<tr>
<td>Remove clots manually</td>
<td>2</td>
</tr>
</tbody>
</table>

The following was cited once only: give IV fluids, tie legs together, press on uterus with sandbag, ice on abdomen.

**Question 19: Do you advise any kind of medicine to a woman in pregnancy, labour and delivery? If yes, what kind?**

95% of respondents replied affirmative. Khmer traditional medicine was by far the most popular. Some TBAs cited several medicines.

Yes:  55  
No:    3

<table>
<thead>
<tr>
<th>Medicine in Pregnancy</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khmer traditional medicine</td>
<td>46</td>
</tr>
<tr>
<td>Ferrus Sulphate tabs</td>
<td>3</td>
</tr>
<tr>
<td>Vitamin injection</td>
<td>3</td>
</tr>
<tr>
<td>Vitamin tablets</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medicine during Labour</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khmer traditional medicine</td>
<td>15</td>
</tr>
<tr>
<td>Vitamin injection</td>
<td>2</td>
</tr>
<tr>
<td>Calcium injection</td>
<td>1</td>
</tr>
<tr>
<td>IV fluids</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medicine post partum</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khmer traditional medicine</td>
<td>46</td>
</tr>
<tr>
<td>Injection (antibiotics, vitamin, calcium, oxytocin)</td>
<td>6</td>
</tr>
<tr>
<td>Call midwife to give injection</td>
<td>3</td>
</tr>
</tbody>
</table>
Question 20: When do you recommend that the baby is put to the breast for the first time?

A large number of respondents knew that the baby should be put to the breast very soon after delivery. Over half (55%) stated that this should happen “very soon” or within one hour after delivery. The reason may have been that RACHA had recently undertaken breast feeding training in the communities of this target area.

<table>
<thead>
<tr>
<th>Earliest Time</th>
<th>Number of TBAs</th>
<th>Earliest Time</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>After the baby cries</td>
<td>12</td>
<td>Before the placenta is delivered</td>
<td>3</td>
</tr>
<tr>
<td>3 days after delivery</td>
<td>12</td>
<td>After colostrum finishes</td>
<td>2</td>
</tr>
<tr>
<td>Within 1 hour after delivery</td>
<td>9</td>
<td>4-7 hours after delivery</td>
<td>1</td>
</tr>
<tr>
<td>Very soon after delivery</td>
<td>8</td>
<td>Don’t know</td>
<td>4</td>
</tr>
<tr>
<td>One day after delivery</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Question 21: Do you recommend anything else beside breast milk for the first six months? If yes, what do you recommend?

More than half (53%) of the respondents stated that other nourishment was required. Most of them recommended porridge and some cited several foods.

Yes: 31  
No: 15  
Don’t know: 12

<table>
<thead>
<tr>
<th>Baby foods</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Porridge</td>
<td>21</td>
</tr>
<tr>
<td>Sugar water</td>
<td>9</td>
</tr>
<tr>
<td>Milk</td>
<td>9</td>
</tr>
<tr>
<td>Fruit</td>
<td>4</td>
</tr>
</tbody>
</table>

The following were mentioned once only: soft drink, biscuit, egg, fish, water.

Question 22: For how many months should a mother breast feed?

Seven TBAs said that they did not know. Nineteen said for two years or more, 7 said for one year, 6 for 18 months. Three respondents said that girls should be breast fed for one year to 18 months and boys for two to three years. Single replies were: until next pregnancy, for 3 years, for 5 years.

Question 23: What is especially good for a woman to eat or drink, in pregnancy, during labour or after the baby is born?

A great variety of foods were mentioned. Most participants cited several foods. It is interesting to note that in pregnancy foods like vegetables and fruit are recommended while after delivery the emphasis is on meat and fish.
<table>
<thead>
<tr>
<th>Good Foods in Pregnancy</th>
<th>Number of TBAs</th>
<th>Good Foods in Pregnancy</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables</td>
<td>33</td>
<td>Milk</td>
<td>4</td>
</tr>
<tr>
<td>Fruit</td>
<td>25</td>
<td>Sweet foods</td>
<td>4</td>
</tr>
<tr>
<td>Meat</td>
<td>23</td>
<td>Sugar cane juice</td>
<td>4</td>
</tr>
<tr>
<td>Coconut water</td>
<td>14</td>
<td>All foods are good</td>
<td>2</td>
</tr>
<tr>
<td>Boiled water</td>
<td>14</td>
<td>Wine</td>
<td>2</td>
</tr>
</tbody>
</table>

The following was mentioned only once: ice, fish, palm tree juice, don’t know.

<table>
<thead>
<tr>
<th>Good Foods in Labour</th>
<th>Number of TBAs</th>
<th>Good Foods in Labour</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coconut water</td>
<td>14</td>
<td>Soft drink</td>
<td>5</td>
</tr>
<tr>
<td>Porridge</td>
<td>13</td>
<td>Rice and meat</td>
<td>5</td>
</tr>
<tr>
<td>Milk</td>
<td>8</td>
<td>Raw egg with wine</td>
<td>2</td>
</tr>
<tr>
<td>Boiled water</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Good Foods after Delivery</th>
<th>Number of TBAs</th>
<th>Good Foods after Delivery</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pork soup</td>
<td>36</td>
<td>Fish soup</td>
<td>8</td>
</tr>
<tr>
<td>Meat</td>
<td>32</td>
<td>Porridge</td>
<td>5</td>
</tr>
<tr>
<td>Food with pepper</td>
<td>16</td>
<td>Rice</td>
<td>3</td>
</tr>
<tr>
<td>Food with salt</td>
<td>13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following foods were mentioned only once: milk, coconut water, every food is good.

**Question 24: What should a woman avoid to eat and drink in pregnancy, labour or after delivery?**

A large number of foods were mentioned and most respondents cited several.

<table>
<thead>
<tr>
<th>Foods to be Avoided during Pregnancy</th>
<th>Number of TBAs</th>
<th>Foods to be Avoided during Pregnancy</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sticky foods</td>
<td>31</td>
<td>Cigarettes</td>
<td>7</td>
</tr>
<tr>
<td>Spicy foods</td>
<td>22</td>
<td>Coffee</td>
<td>3</td>
</tr>
<tr>
<td>Wine</td>
<td>16</td>
<td>Nothing (all food is suitable)</td>
<td>2</td>
</tr>
<tr>
<td>Oil</td>
<td>7</td>
<td>Sugar cane</td>
<td>2</td>
</tr>
</tbody>
</table>

The following responses were given once only: beef, pigs eyes, tea, bananas

Most respondents did not cite any foods to be avoided in labour, except wine (3), spicy foods (1) and sour foods (1)

<table>
<thead>
<tr>
<th>Foods to be avoided after delivery</th>
<th>Number of TBAs</th>
<th>Foods to be avoided after delivery</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw and cooked vegetables</td>
<td>38</td>
<td>Duck, buffalo, frog</td>
<td>8</td>
</tr>
<tr>
<td>A certain type of fish</td>
<td>15</td>
<td>Khmer noodles</td>
<td>5</td>
</tr>
<tr>
<td>Head of pork</td>
<td>15</td>
<td>Forest animals</td>
<td>4</td>
</tr>
<tr>
<td>Sour foods</td>
<td>13</td>
<td>Sea food</td>
<td>4</td>
</tr>
</tbody>
</table>

The following responses were given only once: sticky rice, chicken, mushrooms, ice, raw food.
Question 25: Do you receive any income (presents or money) for delivering baby?

Although this question was posed as an optional question all participants were ready to reply. All said that they received some income, but four stated that they deliver babies free of charge or for minimal amounts if the family is poor. Most received both money and goods.

<table>
<thead>
<tr>
<th>TBA income</th>
<th>Number of TBAs</th>
<th>TBA income</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 000 – 5000 R*</td>
<td>3</td>
<td>Wine</td>
<td>22</td>
</tr>
<tr>
<td>10 000 – 10 000 R</td>
<td>51</td>
<td>Betel leaf</td>
<td>17</td>
</tr>
<tr>
<td>20 000 – 30 000 R</td>
<td>4</td>
<td>Incense sticks</td>
<td>15</td>
</tr>
<tr>
<td>Rice</td>
<td>40</td>
<td>Chicken</td>
<td>3</td>
</tr>
</tbody>
</table>

*5 000 Riel is approximately 1.25 US Dollars

Question 26: Would you be interested in participating in a training course of one week for TBAs in your commune?

Fifty two TBAs responded affirmatively (though a few said that this would have to be near their village). Four declined and two were undecided.

Question 27: Would you be willing to attend regular meetings, approximately every 2-3 months, with other TBAs from your area and the health center midwife, after your training?

Fifty four TBAs responded affirmatively and four declined.

Literacy

Seventy six percent of respondents said that they were illiterate or semi literate. This information will determine the modality for TBA training to a large extent.

Illiterate: 37
Semi literate: 8
Literate: 13

Summary of technical knowledge

Those responses that focused on technical knowledge were analyzed according to correctness in comparison with the way these subjects will be taught in the upcoming training. The average outcome was 34.3% correct replies, ranging from 10.5% to 57.9%. Please see attached detailed break down.

4. Lessons Learnt from the Survey for the TBA Project Component.

Given that almost one fifth of TBAs have had no training or were trained by a relative, and over half of the trained TBAs received their skills from other TBAs, it can be concluded that TBA training is needed in the target area. The fact that 76% of
respondents are illiterate or semi literate will be an important factor for consideration in the design of the training. The survey also provides us with information on subjects that should be prioritized during the training:

**Links between health centers and TBAs:** The survey reveals that more than half (57%) of the interviewed TBAs never visit their nearest health center and consequently also never refer clients to this place. Those who make referrals do so infrequently. In order to strengthen this weak link between health centers and TBAs who are representatives of their village communities, health center midwives should be actively involved in the training and supervision of TBAs. Furthermore it would be advisable if the training included a visit to the nearest health center and OD hospital where the TBAs are made welcome and have the opportunity to learn first hand about the services of these facilities. These visits could contribute towards reducing the reluctance of TBAs to interact with government health providers while also decreasing the often negative expectations of health staff towards TBAs. A training session on the technicalities and problems of referrals would also be useful in this context.

The survey results indicate weaknesses in most technical subjects which need to be addressed in training; for instance:

**Obstetric complications:** The large majority of TBAs (86%) state that they have encountered a variety of complications in their work, but half of the respondents stated that they deal with them alone in women’s homes. In cases of post partum hemorrhage 42% admitted that they did not know what action to take.

**Hygiene:** while the use of RACHA’s home birth kits are doubtlessly contributing towards cleaner deliveries, especially by using new blades and cord ties for every delivery, a number of TBAs said that they clean their instruments by inappropriate methods.

**Ante natal care:** Since the survey revealed that almost all TBAs give limited advice and care to pregnant women, these efforts could be fruitfully expanded by training TBAs in recognizing the importance of referrals of all pregnant women to the nearest health center for ante natal care by a midwife.

**Nutrition:** The replies on nutrition in pregnancy, labour and post partum provide interesting insights into the way nutrition advice is divided in different sectors for pregnancy and post partum. The training will utilize the beneficial aspects of traditional food recommendations and also emphasize that nutritious food of all groups is equally important both in pregnancy and for the lactating mother.

5. Conclusion

In the light of these survey results it can be concluded that basic TBA training is required in the target areas. This will however only be the first step since appropriate follow-up is equally necessary, to re-enforce the new practices and introduce new subjects which cannot be covered in the initial training. It would also be desirable, as a further step, to work with TBAs in their communities in order to find solutions for
problems which bar them from making timely referrals, such as the provision of transport.