CROSSING THE RIVER:
A STUDY OF KHMER WOMEN'S BELIEFS AND
PRACTICES
DURING PREGNANCY, BIRTH AND
POSTPARTUM

FINAL RESULTS AND RECOMMENDATIONS

Patrice M. White, C.N.M., Dr.P.H.
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In January 1996 the National Center for Maternal Child Health released a monograph, *Crossing the River. Traditional Beliefs and Practices of Khmer Women during Pregnancy, Birth and Postpartum*, which presented the preliminary findings of a qualitative study of birth attendants and women of childbearing age. I spent most of 1996 performing more in-depth analyses and writing up the results of this study for a doctorate in public health. Upon my return to Cambodia, friends and colleagues have asked for copies of my dissertation. I am circulating the results and conclusions chapters in order that my findings and recommendations may be available to those who can actually do something with them.

I want to publicly acknowledge some of the many the people in Cambodia who helped me along the way--Kim Baldwin Rafiff, Joy Cooke Kemp; Don Cormack, Janet Cornwall, Maurice Eisenbruch, Claire Escoffier-Fauveau, Keith Feldon, Elizabeth Goodburn, Kay Hansen, Coreen Haslett and the entire executive council of Cambodian Midwives Association, Charlotte Huggins, Helen Kerr, Bun Kim, Lourdes Ladrillo, John Martens, Joel Montague, leng Nary, Janet Riley, Chan Sareth, Margot Sluka, Jenny Thi, Barbara Toothill, Jane Traninger, and Vann Chhovry Vanny. Without your kind words, sage advice, emotional support, logistical help and technical input I never would have finished! And finally, deep, deep thanks are due to the 129 unnamed women in Phnom Penh, Prey Veng, Kampong Speu, Pursat and Kampong Thom provinces who took time from their busy lives to share their stories. May their daughters become mothers in a country where crossing the river is less dangerous.

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ABSTRACT OF THE DISSERTATION

Crossing the River:
A Study of Khmer Women’s Beliefs and Practices
During Pregnancy, Delivery and Postpartum

by

Patrice Michele White

Doctor of Public Health

University of California, Los Angeles, 1996

Professor Charlotte G. Neumann, Chair

Cambodia has recently reentered the international community after two decades of
nearly total isolation. The preexisting health care infrastructure was destroyed during the
years of Khmer Rouge rule from 1975 to 1979. High rates of maternal mortality
underscore deficiencies in the current formal health care stem. Presently, many non-
governmental and bilateral aid groups are assisting to rebuild the formal sector and train
health care workers. Most of the recent safe motherhood reforms, program development
and training of workers have been designed without an understanding of the cultural
beliefs and practices surrounding pregnancy. Few ethnographic studies have been
undertaken since 1975 in Cambodia, and none have specifically focused on beliefs and
practices surrounding pregnancy. The purpose of this study was to describe how Khmer
women view pregnancy and complications of pregnancy and what they do to treat
complications of pregnancy with the goal of identifying beliefs and practices which may contribute to or prevent maternal mortality.

A combination of qualitative ethnographic approaches was used in this descriptive study of rural and urban women of childbearing age and birth attendants. Eighty-eight women participated in focus groups in three rural provinces and in the capital, Phnom Penh. In-depth, semi-structured interviews were held with 41 rural and urban women, traditional birth attendants, and trained midwives.

Specific emic categories of normal pregnancy—siet sork, 'bleeding to wash the baby's face,' and "swelling from the baby"—were identified and described in detail. In addition, abnormal emic conditions which occur during the postpartum period were described including--relapse, priey krawlah pleung, and "stuck blood." Adaptive, questionable, and maladaptive emic practices were described. Three themes which emerged from the data concerning practitioner choice, pragmatism, and prevention were discussed in light of their implications for program development and training. Recommendations were made regarding use of traditional emic taxonomies as a foundation for explaining biomedical complications, "reloading" emic terms, priority topics for training health care workers, and areas for further research.
GLOSSARY OF KHMER TERMS USED

ang pleung (អង្ក្រង់)--lit. fire bed, roasting on a bamboo slated bed over a fire of coals
ambong (ប្រុន)--type of bananas avoided in the early postpartum period; felt to cause toas
barang (ឈរី)--transliteration of Khmer word for French, used to refer to all Caucasian foreigners
bong (ឈរី)--older sibling, also used as form of address to anyone of higher status
borbor (ឈរី)--rice gruel or porridge, the Khmer equivalent of Cantonese congee or Thai kao tome, a common breakfast and comfort food of Southeast Asia
codor (កាវ់)--a type of fish avoided in the early postpartum period; felt to cause toas
chmop (ជីម៉ុ)--midwife, see also yiey mop
chuu siet sork (ជិតស្វារ)--a type of pain during pregnancy; see Section 2, Chapter 7
diep (ឈោះ)--a type of fish avoided in the early postpartum period; felt to cause toas
domrong (ឈឺន)--straight
domrong puah (ឈឺន់)--lit. straight stomach, refers to fetal position; see Section 2, Chapter 7
haem cang ceng tik (េលេងទឹក)--a type of severe swelling
haem koan (ឈេះឈេង)--lit, swelling baby, refers to normal swelling from the pregnancy, i.e., physiological edema
haem leung (ឈំលោឃ)--yellow swelling
haem rook (ឈំរុក)--lit, swelling disease, refers to swelling from disease rather than normal swelling i.e., physiological edema
kapia pteah puah (ឈឺនិឈឺ់)--to protect the pregnancy
khaw (េះ)--traditional dish of meat braised with salt, pepper and palm sugar
kramaar (រេះ)--traditional checked or plaid scarf worn by most rural Khmers
krob (ឈឺ)--to cover, when used to refer to ghosts has the connotation of eventually leading to loss of consciousness and death.
krawlah pleung (ឈឺន័ះ)--see priey krawlah pleung
kruu boran (ឈឺម៉ាៃ)--traditional healer, also known as kruu kmae
kruu kmae (ឈឺម៉ា) --traditional healer, also known as kruu boran
kruu peet (ឈឺ់)--trained health care worker, refers to anyone with formal medical training such as physicians, nurses, medical assistants, midwives, pharmacists, lab technicians
pdes pdas (ឈឺោះឈឺោះ)--nonsense words
peet (ឈឺ់)--see kruu peet
priey krawlah pleung (ឈឺន័ះៈះៈះះ) --ghost which comes while on the fire
punley (ឈឺ់)--a ginger-like root
reyk (ឈឺ់) --to carry with containers suspended from pole held across shoulder
sawsaye (សរសិ) --lit. string; refers to nerves, tendons, veins or any long tube-like structure in the body
sawsaye kjay (សំរាប់ថ្មី)--new sawsaye
sawsaye cha (សំរាប់បរិច្ចេ)--old sawsaye
semlaw (សាប់)--soupy stew which is eaten with rice, usually made with herbs, vegetables and a small amount of meat or fish
siet sork (សំរាប់ក្រឹង)--see chu siet sork
slake slung (ស្បែងស្បឿ)--lit. pale; word also used for anemia
tnam (តាម)--medicine
tnam kmae (តាមកម្ម)--lit. Khmer medicine, refers to traditional medicine
toas (តាម)--relapse
toas baek srorka (តាមដុំស្រក់ថ្មី)--dry skin relapse
toas damneyk (តាមដំណាក់ថ្មី)--relapse from early coitus
toas mehou/ toas camney (តាមដុំមើលថ្មី)--relapse from food
toas pruey cet (តាមដុំព្រែំថ្មី)--relapse from thinking too much
toas tik pleang or toas tik sonsam (តាមដុំព្រែំថ្មីមើលថ្មី)--relapse from rain or dew
toas tweeka/toas sawsaye (តាមដុំមើលថ្មីមើលថ្មី)--relapse from work or from sawsaye
toas tum (តាមទឹក)--relapse for a long time
yiey (យយ៍)--lit. grandmother; can also be a shortened version of yiey mop
yiey mop (យយ៍មើល)--shortened from yiey chmop, lit, grandmother midwife, refers to TBA
CHAPTER 7: KHMER PERCEPTIONS OF NORMAL PREGNANCY, CHILDBIRTH AND POSTPARTUM

While Cambodia has high levels of maternal mortality and morbidity, most women we interviewed had experienced normal pregnancies and deliveries. This chapter focuses on normal pregnancy, birth and postpartum. A clear understanding of the Khmer concept of normal is crucial before emic perceptions of danger and complications can be considered. The first section of this chapter will discuss the safeguards women take to protect their pregnancies. Three emic conditions of pregnancy, stet sork pain (ស្តំស្តុកសេរ), "swelling from the baby" and "bleeding to wash the baby's face" are described in the Section 2. Section 3 contains a vignette about a delivery and discussion of normal delivery practices. Section 4 concludes the chapter with a description of beliefs about and practices during the postpartum period.29

SECTION 1: SAFEGUARDS DURING PREGNANCY

Pregnancy, while considered a healthy state, is also considered a vulnerable and potentially dangerous one. A vast array of traditional practices has evolved to minimize risk during pregnancy or to protect the pregnancy, which literally translates as kapia pleah puah (កាលីពីរសិយូយ). Women, midwives and traditional birth attendants (TBAs) reported these practices with the consistent introduction, "the old women say," before

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29 Postpartum in the strictest sense refers to the period of 42 days after birth, the time it takes for a woman's body to return to its nonpregnant state. I use the term in this report to refer to the immediate postpartum period. When asking questions, I referred to the period "after delivery" and did not specify a time limit.
sharing what they had learned from their mothers, grandmothers and neighbors about safeguarding themselves and their babies during pregnancy.

Proscriptions include avoiding or reducing the amount of physically demanding labor, avoiding "hot" foods and avoiding actions which may harm the baby. Strenuous work was most often defined as cutting firewood, lifting heavy things, hoeing, carrying water in shoulder carriers (reyk un) or transplanting rice. While there was universal agreement that it was good to avoid hard work, many women admitted that they could not follow this proscription because of economic needs.

- "If we didn't work, our children wouldn't have rice to eat." 30

Others, while they did not openly disagree with the proscriptions, stated they hadn't followed them and suffered no ill effects.

- "The old women said not to work hard. They are afraid the baby would come out. But for me I am poor. I did all kinds of work. I carried things on my side. I rode the bicycle and carried things behind. It depended on my energy, but I never had problems."

Babies are believed to receive nourishment in utero by sucking on the umbilical cord.

Most women felt that hard work was potentially dangerous because the cord could dislodge and therefore cause a spontaneous abortion.

- "[If] we work hard; this causes bleeding. The baby can miscarry because the cord separates from the mouth of the baby."

30 Unless otherwise noted, all direct quotations from the data are presented in single spaced bullets.
In addition to avoiding physically strenuous activities, women follow other prohibitions to prevent harm to the baby. The old women advise pregnant women not to fall, not to jump across dikes in paddy fields, not to climb trees, and not to let things hit their abdomen. Activities which are believed to dislodge the cord from the baby's mouth are especially dangerous such as reaching above your head to pick fruit from trees, reaching through doors or windows, or carrying things on the hip or in shoulder carriers. Some elements of sympathetic magic emerge in the advice to not sit or eat in doorways, perform work slowly, eat while walking or sitting down, sit on the floor, wrap a kramoa (traditional checkered or plaid scarf worn by most rural Khmers) around the neck, take showers at night, rise after others in the morning or finish eating after others. The old women say prolonged labors, big babies and difficult deliveries will result if these proscriptions are not heeded. Again, while most women knew of these proscriptions and could articulate them, they did not necessarily follow them.

During pregnancy a woman is considered in a "hot" state and anything which adds heat to her body is considered potentially dangerous for the fetus. Alcohol, chilies, salty and spicy foods normally part of the diet are prohibited during pregnancy for this reason.

"Pregnant women shouldn't eat spicy food or drink hot medicine and alcohol. It is dangerous for the baby inside."

Sour foods were avoided by some women and discouraged by some TBAs although it was not clear if sour foods were considered hot or unsuitable for other reasons. Women...
suggested avoiding other foods like sugar cane, rice porridge, banana flower and tropical fruits because they caused the woman to have lots of or thick amniotic fluid, caused the vernix to be sticky, caused delivery to be difficult or delayed rupture of membranes.

These prohibitions were not reported in all locations.

No foods appeared to be strongly prescribed during pregnancy. Most women stated that they ate whatever they craved if they could afford to do so. Many mentioned that they knew they should eat "good" foods like meat or vegetables during pregnancy but that they were poor and could not afford these foods. Some women indicated that maternal nutrition could affect the health of the baby. Later in the individual interviews, we specifically asked women if they should eat more or less or the same as normal during pregnancy. Most respondents were quite pragmatic in their replies:

- "It depends on the woman. If they are able to eat, they eat a lot. If they can't eat, they eat less."
- "When a woman first gets pregnant she eats a lot. Later on, like when she is eight months, she eats a little. If she eats a lot it makes her feel too full because the baby makes her abdomen full."
- "Pregnant women should eat normally. If they have lots of money they can eat a lot. The baby inside will have good health. Poor people have babies who aren't healthy because they don't eat enough."

Several women in this study discussed their concern that the baby would get too big but mentioned this in connection with their use of traditional medicines, not when discussing diet during pregnancy.
While spiritual dangers are more pronounced during and after delivery, women take special precautions to guard themselves from attack by ghosts, spirits and witches during their pregnancy. Pregnant women often go to TBAs or traditional healers who give them a cotton string to wear around their waist and who pour lustral water over them. Women say that wearing the string and having water poured over them prevents attack from ghosts; prevents miscarriages, and assures quick deliveries.

"When the mother is pregnant they are afraid ghosts or spirits can come in her body."

"I saw a pregnant woman who had black and blue marks on her thighs. The old women said this was caused by the ghost who came to eat their blood. When they have problems like this they find the traditional healer. The traditional healer puts a thread with an amulet on them to prevent miscarriages."

"I protected my pregnancy by wearing a string with an amulet around my waist and having the traditional healer pour water on me. I did this because I believe [in this custom]."

Almost all of the women interviewed, especially in rural areas, mentioned that they had used Khmer traditional medicine tnam kmae during their pregnancy. This medicine consists of infusions of flowers, stems, leaves, roots and bark from local plants and trees. Usually the woman either gathered these herself or purchased them from a traditional healer or TBA and boiled the plants in water or mixed them with alcohol. Women reported that they began to drink tnam kmae in their fifth to eighth month of pregnancy.

32 This water is prepared by traditional healers or TBAs who wave incense sticks and recite Pali (the ancient language of Buddhist scriptures) incantations over it.
pregnancy. Most said they made it and then "drank it like water" throughout the day whenever they were thirsty. Others said they drank it two to three times a day.

Over 50 types of tnam kmae used during pregnancy were reported by the women, TBAs and midwives interviewed (Appendix H). Women commonly reported drinking teas made from kapok bark, guava bark, tamarind bark, jackfruit leaves, lemongrass leaves, black sesame seeds, mimosa and lotus flowers, coconut roots, bark, and fruit as well as other plants which have no English names.3 These were considered cooling medicines and differed from the traditional medicines women reported drinking after delivery. Women said they drank traditional medicines to keep the baby small inside and to ensure easy deliveries, slick deliveries, and clean babies (i.e., babies without vernix which was considered dirty).

In summary, pregnant women actively refrain from certain activities and purposefully engage in others in order to maintain or protect their pregnancies against complications which they consider harmful either to themselves or their babies. These actions are summarized in Table 7.1.

3 Appendix H includes the complete listing of the Khmer common tames, English translation if it existed and botanical names for those plants which I was able to identify during the time of data collection. Similar listings are found for plants used during the postpartum period (Appendix r) and used to treat relapse (Appendix K)
<table>
<thead>
<tr>
<th>Prescribed Action</th>
<th>Complication Prevented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid hard work</td>
<td>Miscarriages caused from umbilical cord dislodging from baby's mouth</td>
</tr>
<tr>
<td>Avoid jumping</td>
<td></td>
</tr>
<tr>
<td>Avoid climbing</td>
<td></td>
</tr>
<tr>
<td>Avoid reaching above head</td>
<td></td>
</tr>
<tr>
<td>Avoid trauma to abdomen</td>
<td></td>
</tr>
<tr>
<td>Avoid working slowly</td>
<td></td>
</tr>
<tr>
<td>Avoid sitting or eating in doorways</td>
<td></td>
</tr>
<tr>
<td>Avoid eating while walking or sitting</td>
<td></td>
</tr>
<tr>
<td>Avoid taking showers at night</td>
<td></td>
</tr>
<tr>
<td>Avoid wrapping a krama around neck</td>
<td></td>
</tr>
<tr>
<td>Finish eating before others</td>
<td></td>
</tr>
<tr>
<td>Get up before others in the morning</td>
<td></td>
</tr>
<tr>
<td>Avoid alcohol</td>
<td>Miscarriage caused from baby getting too hot inside</td>
</tr>
<tr>
<td>Avoid &quot;hot&quot; foods</td>
<td></td>
</tr>
<tr>
<td>Avoid spicy foods</td>
<td></td>
</tr>
<tr>
<td>Avoid salty foods</td>
<td></td>
</tr>
<tr>
<td>Avoid &quot;hot&quot; medicines</td>
<td></td>
</tr>
<tr>
<td>Wear a cotton string around waist</td>
<td></td>
</tr>
<tr>
<td>Have lustral water poured over body</td>
<td></td>
</tr>
<tr>
<td>Drink traditional medicine (t'nam kmae)</td>
<td></td>
</tr>
<tr>
<td>Miscarriage</td>
<td>Miscarriage</td>
</tr>
<tr>
<td>Difficult labor or delivery</td>
<td>Difficult labor or delivery</td>
</tr>
<tr>
<td>Dirty baby (i.e., baby covered with vernix)</td>
<td>Big baby</td>
</tr>
<tr>
<td>Attack from ghosts or spirits which can cause:</td>
<td></td>
</tr>
<tr>
<td>Miscarriage -or</td>
<td></td>
</tr>
<tr>
<td>Difficult labor or delivery</td>
<td></td>
</tr>
<tr>
<td>Dirty baby (i.e., baby covered with vernix)</td>
<td>Big baby</td>
</tr>
</tbody>
</table>

**SECTION 2. EMIC CONDITIONS DURING NORMAL PREGNANCY**

This section describes three emic conditions mentioned by women in FG discussions and explored in greater detail in individual interviews. While other emic conditions were mentioned, the conditions discussed in this chapter and the following
chapter were selected based on criteria of universality (i.e., they were known and could be defined by the majority of the women in the study), uniqueness (they fit into no specific etic biomedical categories) or potential danger (the condition could contribute to morbidity or mortality). The conditions presented in this section were described by women as being normal variants of pregnancies and not problems in and of themselves. Women stated that nothing can prevent these conditions, and they usually resolve with minimal or no intervention.

*Siet Sork Pain*

Women in all focus groups and individual interviews discussed the condition of chuu siet cork (Qìesots’k). This condition was reported throughout pregnancy whenever the baby was in a position which caused the mother discomfort. Physiologically, it could be due to round or broad ligament stretching or discomfort from the fetus pushing against the ribs, back or internal organs. Women usually consulted TBAs or midwives for this problem. Massage was considered the treatment of choice to move the baby to a "straight" or domrong (tMrg;) position inside the uterus. In almost all interviews TBAs mentioned this condition and appeared to view their ability to resolve it as their chief role before delivery.

- "Sometimes when they are transplanting [rice seedlings] they call me to help-to massage their abdomen. A woman told me she had site sork pain in her abdomen and it was difficult to transplant. So, I massaged her abdomen while she lay on the dike. That woman had a lot of children, like four or five. Her uterus was big. It was easy for the baby to move [around] in her uterus and cause site sork."
• Chuu site sock is pain on the side of the abdomen... [it's] not true labor pain... chuu site sork is when the baby inside isn't in the right position. When the TBA massages it goes into the right position, and this pain stops.

While usually the TBAs just massage to we the mother's discomfort, at times they also actually try to move the baby to another position if the baby is not vertex.

• "I examine pregnant women when they are uncomfortable. They come to ask me to make their stomach straight (domrong push) and to check the position if it is breech or vertex. They come to ask me make their stomach straight two or three times."

• "Some women have babies who stay in the wrong position. They call me to move (domrong) the baby into the right position."

Swelling from the Baby

Women in all groups we interviewed felt that some swelling during pregnancy was normal and was caused by the baby (haem koan ehImkUn). The following beliefs were ubiquitous.

• "Some women have swelling near term. The swelling comes and goes three times, and the baby is born. The old women say this swelling is from the baby."

• "Khmer custom says that when a woman has swelling on her legs, the baby will be born soon."

• "I heard the old women say that in the last month of pregnancy all women swell. [They have] swelling on the legs. They swell three times, and then the baby is born. . . . . The swelling comes and goes three times, and then after the baby is born the swelling goes away."

While this "swelling from the baby" generally referred to dependent edema at term without other symptoms, at times women described haem koan as including conditions considered potentially dangerous by Western biomedical definitions. Some women and
birth attendants felt that swelling from the baby could begin as early as five or seven months, occur on the woman's face, arms or all over her body or be associated with shortness of breath, all symptoms of edema associated with pre-eclampsia or severe anemia. A well-trained midwife who does home deliveries in Phnom Penh stated:

"Not all Khmer women know swelling can be dangerous. When they come to see me, some women have proteinuria (literally, salty urine). I tell them, and they always say it's no problem—that the swelling will come and go three times, and the baby will deliver. They don't know they have the disease of proteinuria. Some women listen to me when I explain [this] to them... The women always say (they'll have] swelling three times, and the baby will deliver. They all say this."

Bleeding to Wash the Baby's Face

A special emic category of bleeding emerged in the focus group (FG) discussions which was explored in detail in the individual interviews: "bleeding to wash the baby's face." A TBA and a woman in one of the FG discussions explained it this way:

"There was a woman who had bleeding like this. She was three months pregnant and had bleeding. She asked the old woman, 'Auntie, I am three months pregnant. I have bleeding. I am afraid I will miscarry.' The old woman told her to wait and watch the bleeding a little while to see if the bleeding was a lot or a little. Then the old woman asked her, 'Do you have more bleeding?' She answered that she didn't, that it was just a little bleeding once and then it stopped. The old woman said that it was bleeding to wash the baby's face and wasn't a problem."

Although the definitions of bleeding to wash the baby's face were not precise, most often women stated that it was spontaneous, pink colored, less than a menstrual period, lasted for only a day or two and was not associated with cramping. Bleeding to wash the baby's face was reported at different points during pregnancy. Some women

34 Proteinuria is a classic symptom of pre-eclampsia or pregnancy induced hypertension.
stated that it occurred in early pregnancy about the time they missed their first period.\textsuperscript{35} Others reported that it occurred right before delivery.\textsuperscript{36} The rest said it occurred anytime during three to eight months of pregnancy. While the etiology was usually felt to be menstrual blood left inside, some felt that the bleeding was a result of the woman moving suddenly or working too much. Most felt that that the bleeding was self limited, and no treatment was indicated.

- "Bleeding to wash the baby's face doesn't need anything to help. It stops bleeding by itself."
- "There's no treatment. The majority of pregnant women have bleeding to wash the baby's face. Bleeding to wash the baby's face is not dangerous."

Others, however, suggested a variety of treatments including vaginal washes, massage, injections, ingestion of traditional medicines or vitamins.

Bleeding to wash the baby's face was often defined retrospectively. If the bleeding did not progress to anything more serious, if it resolved on its own or with minimal interventions like those described previously, then the women knew it was bleeding to wash the baby's face. All the TBAs, all the trained midwives and most women had heard something about this kind of bleeding. As with swelling from the baby, some women's descriptions of bleeding to wash the baby's face included symptoms.

\textsuperscript{35} This could refer to implantation bleeding.
\textsuperscript{36} This could refer to "bloody show" or blood tinged with mucus which is one of the first signs of early cervical dilatation and can occur before labor begins if the woman has previously given birth.
which would from a biomedical perspective signal potential danger including bright red bleeding and bleeding that lasted more than a day.

### TABLE 7.2. SUMMARY OF ANTEPARTUM EMIC CONDITIONS

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>ETIOLOGY</th>
<th>USUAL SYMPTOMS</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIFT SORK PAIN</td>
<td>• position of baby</td>
<td>• maternal discomfort</td>
<td>• massage to reposition the baby</td>
</tr>
<tr>
<td>SWILLING FROM THE BABY</td>
<td>• from the baby</td>
<td>• swelling on legs comes and goes 3 times before delivery</td>
<td>• none</td>
</tr>
<tr>
<td>BLEEDING TO BABY's FACE</td>
<td>• menstrual blood left inside</td>
<td>• spontaneous pink-colored &lt; menses lasts 1-2 days no cramping</td>
<td>• none traditional medicines massage injection or vitamins for energy vaginal washes</td>
</tr>
</tbody>
</table>

### SECTION 3. NORMAL CHILDBIRTH: CROSSING THE RIVER

The vast majority of women in Cambodia deliver at home, many with TBAs (Long et al., 1995). The following vignette describes such a delivery and is constructed from stories heard in both FG discussions with women and individual interviews with women and TBAs.

Nary stretched beneath the mosquito net and pulled the blanket close around her neck. She could see light beneath the house and hear the chickens...

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37 According to the study cited, 84% of worsen who gave birth in the last five years delivered their last child u home. Ninety-one percent of the rural women studied delivered at home, 63%. of these rural women were attended by TBAs.
begin scratching. It must be near sunrise. Ooh, the baby was definitely awake and moving now. She felt pressure against her ribs and bladder. She tried not to wake Sambat as she slipped beneath the net and crawled to the door. She unlatched the bar, moved the thatch door to the side and carefully climbed down the ladder and across the compound to the edge of the forest she and her neighbors used as their toilet. As she squatted she felt her stomach tighten. According to her reckoning, it could be any day now.

When she'd seen Granny Heang for siet sork pain a few days ago, Granny had said the baby was in the right position. Well, she prayed things would go as well with this one as they had with Saran who was now almost three. Of course, no one was supposed to talk about such things in front of pregnant women, but she'd heard. A woman in Phum Thom had died 3 weeks ago just a day after she gave birth. Since no one could really give her details, she wasn't sure quite what happened, but it was something related to bleeding.

By the time she returned to the house, Sambat was awake and cutting wood Nary took an armload upstairs. Squatting beside their clay stove in the upstairs kitchen, she fanned the banked embers into a flame. Ooh, her stomach was hard again. Was this true labor? She measured out rice for their next meal, picked out the stones, washed the rice, and set the pot on the now flaming fire. Little Saran was awake and followed her around the house as she rolled up the sleeping chats, folded the mosquito nets, and blankets and stowed them in the rafters. She took Sarun downstairs and washed his face with water from the concrete water jar. The water was cold these mornings, and Sarun squirmed and protested "Be still, child. Today you must have a clean face. This will be a special day. Granny Heang is coming." She bent over. This pain was the strongest yet; the baby was pushing against her backbone. "Saran, go get your father." When Sambat's troubled face appeared, Nary reassured him. "It's not a problem, but the pains are getting hard. I think I'm getting ready to have the baby."

"So, is it time for me to go get Granny Heang?" he asked She nodded yes and then, closed her eyes with the next pain. "Should I tell your mother too?"

"Yes and have her tell older sister." As he climbed down the stairs and got on their bicycle, Nary straightened things in the kitchen, swept the floor and removed from the trunk cloths she had prepared-old kramaas and sarongs she'd washed to wrap the baby in. The pains were coming more often now. She squatted near the fire, fanning the smoke away and listened to Sarun playing with the neighbor's children.

Sophiep, her next-door neighbor, called from beneath the house. "Saran is telling everyone this is a special day. Are the pains strong?"

Nary smiled and said, "I've sent Sambat for Granny Heang."
Sophiep started up the ladder, "That's good. It looks like they're already here." She pointed behind her. Nary stood and went to the doorway and bowed before Granny Heang, her mother and older sister.

"So, child, when did these pains begin?" Granny Heang sat down on a mat unrolled by Nary's mother and placed a basket with betel nuts and leaves and scissors beside her on the floor.

"I woke with pains around the time the cock first crowed, grandmother, but they were very weak. Now they are stronger, and the baby's head is pushing against my backbone." Granny Heang squatted beside Nary and felt the baby's position. She pressed against both sides of the uterus and then on top and above the pubic bone. She pressed hard. "Ah, the baby's still straight." She massaged Nary's arms and legs. "Well, I want you to walk around until the pains are so strong you can't walk anymore. When you lie down, the baby takes a long time to deliver. Have you eaten anything today?"

"Not yet grandmother."

"Well, you must eat to keep your energy—rice or borbor (am)38 and then coconut water or orange soda."

Sophiep called from the kitchen, "This rice is done. Do you want some?"

"Yes, child. That would be good. Also, I need some boiling water to pour over my scissors."

Nary began pacing back and forth around the room. With strong pains she grabbed onto the crossbeams that supported the thatch walls of their house. Granny Heang chewed her betel nut and drank tea with Nary's mother and discussed people's harvests which were nearly complete now and the upcoming boat races. Sophiep and Nary's older sister prepared food in the kitchen.

"Ah, child I can see the pains are much harder now. You have sweat on your upper lip. Have you had a shower yet today?"

"No, grandmother."

"Well, it is good to clean your body, and it will give you energy." Sophiep and Nary's older sister helped her down the ladder. She stood beside the water jar while they poured water over her. Oh, it felt good. The baby kicked sharply and moved downwards. She slipped her clean sarong over the wet one, stepped out of the wet one and climbed back into the house.

Granny Heang said, "Your pains are close together now. I'll insert my fingers and check the cervix to see how much it's open... Oh, it shouldn't be long now. Less than the time it would take to chew two betel nuts, rd say."

Grandmother made the string for the baby's cord by winding three loops of cotton thread around her big toe and then twisting it together. She set this string next to

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38 Rice gruel or porridge, the same as congee in Cantonese or kao tome in Thai, a ubiquitous breakfast and comfort food in Southeast Asia.
her scissors which she removed from the boiling water and placed in an empty coconut shell on top of a newly washed krama.

Nary sat against one of the stilt poles in the center of the room. I just want to rest, she thought. I can't walk anymore. Granny Heang sat beside her and continued to massage her arms and legs. "Oh grandmother, my knees and legs are shaking, and the baby is moving down itself. And look, water is coming out."

"Lie down, child. Its time. Now, prop those pillows behind her so she can sit up. Child, grab onto your ankles with your hands." Nary leaned back against her sister and the pillows. Her mother helped hold her stomach, and Sophiep sat at her side. Granny Heang sat below Nary with her feet pressing against Nary's hips. She pushed with her feet when Nary pushed. Nary's mother helped hold her stomach so the baby couldn't rise back up between the pains. The pain was intense, and Nary bit her lip so that she wouldn't cry out.

"Ah, we can see this little one's head. Now push again," Granny Heang urged her. And with a violent pain the baby came. Granny Heang quickly moved the baby to the clean cloth Nary had given her and sprayed water from her mouth over the baby until it cried. A good strong cy. Nary was relieved. Oh but the pains were still coming. "We will wait until the uterus bends, and then I'll deliver the placenta, child... Do you feel a pain?" Nary nodded * "Okay, push hard. It's all here. Where's the salt and banana leaf?" Granny Heang took the string she had prepared, tied three knots in the baby's cord and cut the cord with her scissors. She then sprinkled the placenta with salt, wrapped it in the leaf, and gave it to Sambat to bury in the yard in a place which never flooded. Granny Heang was massaging her stomach hard now to get all the blood out. "Child, there's no problem. All the blood is out."

Like Nary in this vignette, most women continue with their daily activities until hard labor begins. Once contractions begin or become strong, family members are sent to inform the TBA. While most sub-districts have TBAs in residence, some women summon TBAs who travel an hour or so by motorcycle to reach them. Most, however, live within walking or biking distance or in the same village as the women they deliver. TBAs bring their delivery kit if they have been trained by noneovemmental organizations.
Untrained TBAs reported that they took their basket of betel nuts and leaves and some combination of scissors, forceps and thread to tie the cord although this is sometimes supplied by the mother. Some stated they took nothing at all.

Trained midwives in Phnom Penh usually delivered the babies of relatives, friends or neighbors known to them or poor women who had heard of them and who could not afford to go to the hospital. Like the TBAs, these midwives are either called when labor begins or when the contractions become strong. Trained midwives took more equipment to deliveries than TBAs. In addition to delivery instruments, most of the trained midwives also took injectable medicines and N fluids.

When they arrived at the woman's house, over half of the TBAs interviewed stated that they performed vaginal examinations to determine cervical dilatation and fetal position. Most all of the TBAs stated they palpated the fetus to determine position, and many stated they massaged the woman's abdomen to assure that the baby was in proper position. As during pregnancy, TBAs appeared to see their primary role as touching the abdomen of laboring women-assuring that the baby was in a straight (domrong) position and massaging it into this position if it was not.

Advice given to laboring women by birth attendants was remarkably the same in all locations. Women were encouraged to continue walking around to help the head descend, to do light housework if they felt like it, to take showers or to rest. Some felt

The contents of these kits vary with the NGO but usually include some combination of soap, soapdish, nail clippers, nail brush, scissors or razor blades, forceps, towel, umbilical cord tape, plastic sheet and a pot for boiling instruments.
that lying down would prolong labor and that women should continue walking. If they felt like it, women were encouraged to eat light foods and drink liquids to keep up their energy. TBAs shared the following:

- "When they have weak pains, I tell them to walk or to work in their house so that the cervix begins to open... I tell them to drink chicken eggs [mixed] with hot water and a little sugar to give them energy. Sometimes I tell them to drink [sweetened condensed] milk."

- "When a woman is in labor I tell her to walk back and forth, to take a shower, to eat this or that so she'll have energy-like borbor or rice. She doesn't need injections for energy. [She shouldn't] lie down. When you lie down, the baby takes a long time to deliver."

- "I tell her don't cry. Take a shower. Walk around. It will be an easy delivery. I tell her to eat rice or borbor so she'll have energy. Women with money buy sweetened condensed milk to drink"

TBAs had a strong sense that their presence was important to the women, a sense very strongly echoed by the women. When asked who they preferred to have near them during delivery, everyone mentioned the birth attendant and a combination of family, friends and neighbors.

- "If the yiey mop (yaym:b TBA) comes, I feel happy. I can't compare it. I feel happy and grateful to the yiey mop."

- "[If] the TBA is near me when I have strong pains, I feel secure."

Women stated those who stayed with them during delivery helped massage them, held them during delivery, provided emotional support, helped in the physical preparation for delivery and advised them if there were problems.
There was no consensus about the presence of husbands at delivery. Some women definitely wanted their husbands to be present while others said they wanted them around but not in the same room. Some said they would be embarrassed to have their husbands present when they were pushing. Others said there was no need to have husbands or relatives around if deliveries were normal but that it was good to have them if there were problems. One woman stated:

- "I want my husband near me during labor. I want him to know about the labor-how hard it is. I don't want him to be away when I'm near term."

There was no indication in either the FG discussions or subsequent individual interviews that a husband's presence at childbirth was considered abnormal or culturally inappropriate. It appeared to be up to the desires and discretion of the individual woman and her birth attendant. One TBA shared her somewhat unusual philosophy:

- "If a man doesn't love his wife, I let him near his wife. Then I tell him that his wife is having a hard time like this and that he needs to help her and not go away. [I tell him,] 'You must love each other. You must find water and wood for your wife.' If a man loves his wife and helps his wife, I don't let him near her. I let the man stay near the woman [only] until [the time] the baby delivers."

All the TBAs, midwives and women interviewed stated that women delivered in a semi-sitting position propped up with pillows beneath their head and shoulders or held up by family members or friends. A few TBAs stated that if the woman had problems pushing they had them sit on a low stool or squat while holding side beams of the house. Most women delivered either on a mat on the floor or on a mat on a bed with the TBA either squatting or sitting on the mat with them. A few delivered directly on the slatted
floor so that blood and amniotic fluid could drip below the house. Many TBAs assumed the position mentioned in the vignette with their feet or toes touching the ischial tuberosities or perineum of the delivering woman.

Most all of the TBAs waited until after the placenta delivered to cut the baby's cord. Cords were cut with scissors, razor blades or knives. Scissors belonged either to the birth attendant or family, and razor blades were most often purchased by the mother. Scissors were sometimes boiled. Other times boiling water was poured over them, or they were flamed with alcohol. Special care was taken in tying the cord to prevent wind from entering the baby's stomach. Wind was felt to cause intestinal swelling which could be fatal. After tying and cutting the cord, the baby was wrapped and put in a special place away from the mother. Mothers were cleaned and moved to a bed to "roast."

Placentas were most often cleaned with salt, wrapped in a mat, bamboo leaf or plastic bag and given to the husband to bury. Dry burial sites were chosen since it was believed that if the placenta got wet, the baby would get skin diseases like impetigo or scabies more easily. Although most all women reported taking special precautions about placental burial, several women said they threw the placenta in a muddy place with other rubbish, and one woman reported she burned it.

40 The practice of roasting will be discussed in detail in Section 4 of this chapter.
SECTION 4. NORMAL POSTPARTUM: RESTORING BALANCE

Khmer women view postpartum as a particularly vulnerable time. After an event as dramatic as birth, many traditional practices are considered necessary to restore women's balance. Significant beliefs and practices uncovered in FG discussions and individual interviews will be discussed in the following section.

Sawsape Kjey

Once they deliver, Khmers believe all women are in an altered state termed saysaye kjey (សំយំក្មេយ) or new saysaye. The word sawscrye literally means fiber and serves as a classifying word for strings, threads and hairs (Headley et al., 1977). It also refers to long, string-like structures in the body including blood vessels, nerves and ligaments. Women explained that since they used their sawsaye so strenuously while pushing during the delivery, after delivery the sawsaye are new, immature and fragile. Certain symptoms indicate when women have new sawsaye in contrast with mature or old, sawsaye chaa (សំយំជាមួយ) :

- "When they have new sawsoye they get out of breath, shake, have diarrhea and abdominal swelling and headaches. It isn't easy in their bodies. Sometimes they feel like vomiting. When they have old sawsaye they have normal energy and feel fine."

- "New sawsaye is when your body is weak. When you do work, you feel palpitations. When you are one or two months [postpartum] you feel like your energy increases little by little. When you do hard work, you feel increased shaking in your body. You feel a little better day by day and month by month. When you have old sawsaye, you have energy. You don't shake in your body. You are strong enough"
Women were not able to articulate a specific time period when new *sawsaye* transformed into mature *sawsaye*. Although most maintained that the period was the same for all women, when probed many women admitted that those who had experienced difficult deliveries would have new *sawsaye* longer than those who had normal deliveries.

"If a woman has a difficult delivery she has new *sawsaye* for a long time. Because they had a difficult delivery they aren't the same as women who had easy deliveries. They have new *sawsaye* for nearly a year. Then after that they are the same as women who had normal deliveries."

According to respondents new *sawsaye* lasted anywhere from two to three days to 12 months after delivery. The majority of women in individual interviews said it lasted three to four months. This matches responses of women in FG discussions who when asked when their bodies were back to normal after delivery replied three to five months, before the concepts of new and old *sawsaye* were known.

The period of new *sawsaye* seems to have a functional definition. When a woman is able to resume normal activities and not feel ill as a result, she has old *sawsaye*, but this does not explain the concept fully. Rich women and urban women who have others to take care of them are said to experience new *sawsaye* for much longer periods of time than poor rural women who are forced to resume demanding physical labor soon after delivery.

* "The length of new *sawsaye* depends on the health of the woman. Some women are dizzy, weak, and don't have energy. Some women have good health. Two or three days after delivery they can wash clothes. Women in my village—I have seen some of them sit and sell in the market two or three days after delivery. Some women stay at
home for a long time. They don't dare go anywhere. They always lie down. They have money. They have maids to help them. They have new sawsaye for a long time."

- "It depends on if the woman is rich or poor, if the woman is in the countryside or if she grows vegetables. Some women stop roasting for one day, and they pound unhusked rice. They don't get sick [literally have tons of cas]. It depends on the habits of the person. Some women don't have the habit of working. They have new sawsaye for a long time. Some can work one or two months after delivery—no problem. Some women don't dare to carry water five or six months after delivery."

**Roasting**

Since a woman is in a "hot" state during pregnancy, it is not surprising that after delivery she is considered "cold." As soon as the woman is stable after delivery, she is cleaned and lies on a bamboo bed a meter tall over a wood or charcoal fire contained in a small stove beneath the bed. When asked the reason behind this custom of lying on the fire or roasting (ang pleung), a midwife replied:

- "All the women have had this belief for a long time. There's a story. There was a couple, a husband and wife. His wife got pregnant. They ran away into the forest. Then she delivered the baby in the forest. After that she was cold. Then her husband made a fire for his wife to lie on to prevent coldness. [Ever] since that time, all Khmers believe that roasting cooks the sawsaye."

To further protect themselves from cold and wind, women reported wearing long sleeves, socks, gloves and a krama wrapped around their head during this early postpartum period.

When asked how long women needed to roast, most responded three nights and three days. When asked how long women roasted in the past and specifically how long

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41 Speaker is referring to women who live in produce-growing areas surrounding Phnom Penh.
their mothers and grandmothers roasted, most replied that they too had roasted this long. Some women roasted for a week or two. Usually only wealthy women, however, could afford to buy firewood or charcoal and not return to work around the house for periods longer than three days. Sometimes women roasted longer after the first delivery and then for three nights and days with subsequent deliveries.

In addition to preventing coldness and cooking their saysaye, women said they roasted to prevent blood from clotting inside their uterus, assure good slain in their old age, insure overall health, energy and well being, prevent joint aches or problems and prevent postpartum sicknesses or relapses.

- "Women roast to follow the Khmer customs. If they don't roast after delivery, they will be cold. During the time they're cold they can have cramping and discomfort in their body. They roast to make the blood liquid and to make their skin hot and to make the woman feel good"
- "It makes a woman have energy. When a woman roasts it cooks her sawsaye. She can then do work and not relapse like [when] transplanting, carrying rice seedlings on her shoulder or carrying rice seedlings with an ox-cart."
- "Roasting prevents your body from getting cold during the cold or rainy season. You don't have pain in the joints of your arms or legs. . . A woman who doesn't roast feels weak and has no energy, gets thin and cannot do hard work like others-for example, transplanting."
- "We all roast because we are country people. We do hard work. Roasting prevents relapse. . . they roast to make their skin good, to prevent chloasma."

Some women said they literally stayed on the fire the entire three days, turning "like when you roast a fish" to make sure they got full benefit from the heat. This
constant roasting is probably not done by all women. One midwife suggested that young mothers often lie on the fire only when family members are around and that sometimes parents stay with their daughters the first three days after delivery to insure they stay on the fire.

**Substitutes for Roasting**

In addition to roasting, during the postpartum period women drink "hot" Khmer medicines (Appendix 1), put hot rocks on their abdomen, put ice, also considered hot, on their abdomen, steam and inject "hot" medicines. While women stated that the efficacy of these methods varied, all were done to restore the body to its proper balance. When asked what would happen if a women neither roasted nor had injections of hot medicine, the answer was inevitably that she should substitute another method of restoring heat like those listed above. It appeared inconceivable to respondents that newly delivered women would engage in none of these activities.

While roasting is the most traditional way of assuring well being postpartum and is widely practiced in rural areas, it is practiced less often in cities. According to one midwife who does home deliveries in Phnom Penh, no one she has delivered since 1980 has chosen to roast. Another midwife stated that only 20% of women she delivers choose to roast. Women who do not roast inject hot medicines which are reported to have the same effects on their bodies as roasting. Many rural women denied this and maintained
that roasting was superior for women who engaged in physically demanding work. Others stated they roasted only because they could not afford to buy medicines to inject.

"They [roasting and injections] are not the same. Women who roast and drink Khmer medicine have better skin than women who inject medicine. . . . They get injections to be comfortable in their body and get energy, but it's not the same as Khmer medicine. If you drink Khmer medicine the effects last longer. Medicine from the peer doesn't last as long."

"You don't have medicine for injections, so you roast. . . . They [roasting and injections] are not the same. They are different. Women who get injections are rich. They have money to get injections. They don't do hard work. They don't do hard work under the sun. If they did hard work like us poor people, they wouldn't be able to work."

"If a woman delivers in the hospital and gets injections, she'll have more energy than if she roasts. In our country there's no money to get injections so we roast and drink Khmer medicine. Injections are better than roasting."

"Injections are better than roasting... Injections cook [the smwsaye] better than roasting, and it's easy... I didn't have enough money to buy medicine to inject. If you have money, you can deliver at the hospital. It is easy."

Women were asked if everyone should roast. The answer was overwhelmingly affirmative. If women didn't roast, respondents stated that they should substitute injections. Those who took part in individual interviews were then asked if women with specified conditions-severe headache, blurry vision, severe swelling or bleeding-should roast. Some responded that these women shouldn't roast at all, while others stated they could roast for shorter periods of time or over a low fire. Many asserted that it didn't matter and stated that these women should roast as normal.
When asked what they injected, women listed a plethora of drugs which are listed in Table 7.3. These medicines were often given by untrained and trained health care deliverers who had no idea of their mechanism of action or potential side effects. In addition, these injections were often given with unsterilized or improperly sterilized syringes and needles. Women reported getting injections to make their skin and body hot.

TABLE 73. MEDICINES INJECTED BY WOMEN POSTPARTUM

<table>
<thead>
<tr>
<th>NAME OF MEDICINE (GENERIC NAME)</th>
<th>REASON WOMEN USED IT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becozine (vitamin B1, B2, B5, B10 and P complex)</td>
<td>To make skin good/hot, increase energy</td>
</tr>
<tr>
<td>Beponteyn (dexpantenol, DL gamma lactone, p-hydroxybenzonate methyl hydroxypropyl)</td>
<td>To make skin good/hot, increase energy</td>
</tr>
<tr>
<td>Vitamin B6</td>
<td>For postpartum hemorrhage</td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>To increase blood pressure, increase energy</td>
</tr>
<tr>
<td>Vitamin B complex</td>
<td>To increase energy</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>To make the sawsaye soft</td>
</tr>
<tr>
<td>Lactate IV fluid</td>
<td>To increase blood pressure</td>
</tr>
<tr>
<td>IV with glucose</td>
<td>For fever</td>
</tr>
<tr>
<td>Calcium</td>
<td>To make skin hot, decrease pain, increase energy</td>
</tr>
<tr>
<td>Ampicillin</td>
<td>To heal the uterus</td>
</tr>
<tr>
<td>Penicillin</td>
<td>To heal the uterus</td>
</tr>
<tr>
<td>Utine (unknown generic name)</td>
<td>To make skin hot, increase energy</td>
</tr>
<tr>
<td>Strychnine</td>
<td>To make skin hot, increase energy</td>
</tr>
<tr>
<td>Atacrilene (unknown generic name)</td>
<td>To lower blood pressure</td>
</tr>
<tr>
<td>Heptamyl (heptaminol HCl)</td>
<td>For postpartum hemorrhage</td>
</tr>
</tbody>
</table>

Women usually gave brand names of different medicines they injected. My research assistants and I compiled Table 7.3 after tracing the brand names in local pharmacies and looking at package inserts to determine generic equivalents.
and to have energy, have enough breastmilk, be able to eat and sleep. Most received daily injections for two or three days to a week after delivery.

**Postpartum Diet**

Many women described dietary proscriptions in the postpartum period and more specifically, during the period of *sawsaye kjey*. These proscriptions were most often mentioned in connection with the postpartum condition of toas (cw) and are described in detail in Chapter 8. The foods women considered dangerous varied, but several foods were repeatedly mentioned including pineapple, jackfruit, different types of bananas, field cucumbers, water buffalo, pig's head and different varieties of fish. Some women stated that as long as they ate these foods while roasting they could eat them without fear once they finished roasting.

The majority of women reported eating diets which were high in salt after delivery such as borbor with salt and pepper, rice with salt and pepper, pork, beef, or fish *khaw* (a), and beef with lots of pepper, salt and MSG. Some reported drinking water boiled with salt. Other respondents stated that they ate salty food so that they would be thirsty and then drink more traditional medicine (*team kmae*). Several stated that after some pregnancies they had eaten only rice with salt because they had no other food.

Vegetables, both cooked and uncooked, were felt by some to be dangerous because they caused abdominal and vein swelling and cramping.

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43 Traditional dish of meat braised with salt, pepper and palm sugar.
"The old women forbid us to eat vegetables. I was afraid of a swollen abdomen and swollen veins. If we eat vegetables we can have cramping and heartburn and have swelling in our stomach, and then we can't eat anything."

Others stated that ingestion of "wet" foods could cause swelling of the veins. Because of this they avoided soups, stews and drinking tea. Both of these practices were isolated, however, unlike the ingestion of salt which appeared to be widespread in the women interviewed.
CHAPTER 8: KHMER PERCEPTIONS OF PROBLEMS AND DANGERS DURING PREGNANCY, CHILDBIRTH AND POSTPARTUM

Both the focus group (FG) discussions and individual interviews reinforced the common perception that levels of maternal mortality and morbidity are high in Cambodia. The emic perspective of problems and dangers will be discussed in the first three sections of this chapter grouped into the etic categories of pregnancy, birth and postpartum. The fourth section will discuss causes of maternal death from both emic and etic perspectives.

SECTION 1: PREGNANCY PROBLEMS

Women stated that some problems occur during pregnancy either because they are not preventable or because pregnant women do not carefully follow the traditional proscriptions. With conditions discussed in this section, swelling and bleeding, both normal and abnormal types existed. Differentiation between the two types was often difficult. What one woman would describe as normal, another would describe as abnormal and potentially dangerous.

Swelling during Pregnancy

In contrast to normal "swelling from the baby" (hoem koan), women mentioned other types of swelling which they considered abnormal and dangerous. From a biomedical perspective this abnormal swelling could be due to severe anemia, pregnancy induced hypertension, underlying cardiac disease, hepatitis or other types of liver
damage. Women contrasted this abnormal swelling with swelling they considered normal.

- "Swelling from disease' (haem rook) is like swelling from the baby, but [with] swelling from the baby the woman can breathe easily. With swelling from disease she cannot. She has shortness of breath"

- "Another kind of swelling is swelling on the arms, legs and all over the body-severe swelling so that water comes out (poem cang cerg) . . . swelling from disease. It is a sign that you have a problem."

- "I know another kind of swelling called 'yellow swelling (hoem leung). Women with yellow swelling have yellow on their face, their eyes and skin... Yellow swelling is dangerous. The urine is yellow. Women who have yellow swelling die soon after delivery."

- "Some women have swelling from disease. The swelling is all over their body. [With] this swelling they are weak and have paleness. Women who have swelling near term which is caused by the baby don't have paleness."

If a woman had swelling which she considered to be not from the baby (poem koan), she pursued varied courses of action depending on her resources and the health services available. Some women sought the services of traditional healers (kruu kmae) who prescribed traditional medicine either to drink or apply topically, or they recited incantations, sprayed water and blew over the women. The treatments were similar to those for attack from ghosts or spirits which suggests they considered the swelling to have supernatural causes. Other women were advised or decided for themselves to modify their diets and eat bland, low salt foods or to eat special foods like mung beans

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44 This word also means anemia or anemic.
boiled with sugar and coconut milk, rice with bananas, tender coconut water, ripe mangoes or watermelons. Still others sought care from local pharmacies, traveling drug sellers or the formal sector and were given oral diuretics or injections of diuretics or B vitamins.

**Bleeding during Pregnancy**

Women contrasted "bleeding to wash the baby's face," which was retrospectively defined as normal, with bleeding which was not normal and often preceded miscarriage, fetal death or preterm labor and delivery. This abnormal bleeding provoked considerable concern:

- "Bleeding during pregnancy is not normal. I would be afraid [if I had bleeding]. If I had relatives who had bleeding during pregnancy, we would meet together and discuss what to do."
- "During pregnancy a woman can have a problem of bleeding. Lots of bleeding can be dangerous."

Most felt that this "other" bleeding was a result of not properly following the proscriptions of pregnancy.

- "If we follow-up the pregnant women who have bleeding or miscarriage, we ask them, and they never have bleeding or miscarriage without a reason. The reason is, like if they fall down when they're walking, if they fall when they're biking or have something or other hit their abdomen while they're walking. Most pregnant women have reasons like these that cause bleeding or miscarriage. I've always heard it [explained] this way."

Women who participated in the study felt that bleeding associated with spontaneous abortions was the most common type of bleeding apart from bleeding to
wash the baby's face. Many women said they consulted traditional birth attendants (TBAs) for this problem, and the TBA's responses verified this. Some TBAs seemed comfortable massaging women and assisting them when miscarriage was eminent. Other TBAs said they were afraid and preferred to send the woman to trained health workers. TBAs treated post-spontaneous abortion women like women who had delivered at term and gave them traditional hot medicines to drink and massaged their abdomen to "get all the blood out" after delivery.

**TABLE 8.1. SUMMARY OF PROBLEMS DURING PREGNANCY**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Etiology</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bleeding</td>
<td>• Not following the proscriptions of pregnancy-falling</td>
<td>• Injections</td>
</tr>
<tr>
<td></td>
<td>• Experiencing abdominal trauma</td>
<td>• Khmer medicines to stop bleeding</td>
</tr>
<tr>
<td></td>
<td>• Drinking alcohol</td>
<td>• Massage by TBA to help the baby come out</td>
</tr>
<tr>
<td></td>
<td>• Climbing trees</td>
<td>• Have TBA &quot;lift&quot; abdomen</td>
</tr>
<tr>
<td></td>
<td>• Jumping over ditches</td>
<td>• Have TBA take the blood and baby out</td>
</tr>
<tr>
<td></td>
<td>• Attack from ghosts or spirits</td>
<td></td>
</tr>
<tr>
<td>Swelling/edema</td>
<td>• From disease</td>
<td>• Traditional medicines to drink or topically apply</td>
</tr>
<tr>
<td></td>
<td>• Attack from ghosts or spirits</td>
<td>• Traditional healer recite incantations, spray water and blow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bland, low salt foods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Special foods-</td>
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<tr>
<td></td>
<td></td>
<td>• Oral diuretics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Diuretic injections</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vitamin B injections</td>
</tr>
</tbody>
</table>
SECTION 2: DELIVERY PROBLEMS

Stuck Babies

The most common fear expressed about labor and delivery was that the "baby wouldn't deliver" or "the baby would be difficult to deliver."

- "Some women have dangers like the baby doesn't deliver. Some have labor for many hours. Some women have labor for many days."
- "I've heard of a woman who had a very long labor. The baby couldn't deliver. When the labor is very long like this, it can cause both the mother and baby to die."
- "They have a problem during delivery and cannot deliver the baby. They stay home for four or five days. Their parents pray and offer this and that and find the kruu kmae to help, but they cannot help. Then they bring her to the hospital."

The biomedical etiology of this problem could include inadequate uterine contractions, malposition of the fetus or cephalopelvic disproportion. As discussed previously women try to avoid this complication by avoiding hard work, drinking traditional medicines to make their babies small and easy to deliver, avoiding trauma or injury and following the proscriptions of the old women. If traditional healers are present in the community and the family believes in their expertise, they are often called when the woman and her family and birth attendant decide that there is a problem.

- "The kruu boran helps women who have a long labor. He gives them medicine. He spits and recites incantations and gives Iustral water to the woman to drink to give her energy."

45 Kruu boran and kruu kmae are synonyms used interchangeably by these women to refer to traditional healers.
• "Sometimes if a woman has a hard delivery, her relatives call the kruu Kmae to help ... The kruu kmae comes during delivery if a woman has no energy. The kruu kmae helps recite incantations to give her energy and to prevent the ghost or spirit from coming to scare her."

• "I call the kruu kmae for some women who have long labor. The kruu kmae makes water to apply to their abdomen and gives betel nut to them to eat. After that, the baby delivers."

Some women recognized limits to the traditional healer's expertise and sought help from the formal health sector for certain problems.

• "During delivery they call the kruu kmae to help. The kruu kmae gives (lustral] water to drink, and then (the woman) has energy. If the baby is big, the kruu kmae cannot help, and (the woman) must go to the hospital."

Other women, however, sought care from trained health care deliverers (kruu peer) and contacted traditional healers only when all else failed

• "They go to see the kruu kmae when the TBA and kruu peer have helped already, but the baby hasn't been able to deliver. Then they call the kruu kmae to pray and offer this or that."

Some TB As and women stated that while it was common in the past to call traditional healers, now they relied on trained health workers.

• TBA: "When a woman has a long labor and no energy I call the kruu peel to give injections to give her energy. I never call the kruu kmae to help."
• Interviewer: "In the past what did they do when they had a problem like this?"
• TBA: "During that time if a woman had -a long labor and the baby didn't deliver they called the kruu boran. Sometimes the baby delivered, and sometimes the baby didn't deliver. The mother could die."
• Interviewer: "What did the kruu boran do?"
• TBA: "The kruu boran sprinkled lustral water over the woman and blew over them, but now they don't call the kruu kmae. They call the peet (trained health worker)."
• Another TBA: "In the past they called the *kruu kmoe* to help, but now they don't call the *kruu kmae* because all the pregnant women are examined by the *peel* every month- If they have any problem, the *peel* knows."

Determination of the onset of true labor is difficult and is often made retrospectively. Some TBAs were able to correctly differentiate between true labor and false labor. Others made no distinction but felt that when strong contractions came the baby would eventually deliver, and their role was to wait. Most of the TBAs trained by nongovernmental organizations (NGOs) stated that if the labor was "too long" they would refer the woman to the hospital.

• "If a woman has hard labor for a long time but the baby won't deliver, I transfer her to the hospital. If the woman has long labor but with weak pains, when she has strong pains she will feel like pushing, and the baby will deliver. I deliver these women"

• "For a woman who has long labor with strong pains at first I examine the cervix. If they have strong pains and push and the cervix is all open and they push many times but the baby doesn't deliver, I cannot deliver this baby. I must send them quickly to the hospital. Sometimes the baby doesn't deliver because it has a big head."

• "I have seen women who have long labors. Last year when I studied someone called me . . . I went with them. Near sunset we were near the house. I saw the woman on the way. Her house was north of my village. Her relatives were carrying her in a hammock. I asked her how many days she had labor. They said she had labor for 2 nights and 3 days. I asked them to keep her [where they were] for 2 hours. I didn't want them to take her to the hospital. After that, I examined [her]. Then I told them there weren't any problems. It wasn't time for the baby to be born. They said that the *peel* had given her four injections already, but the baby hadn't delivered I said she didn't need to have any more injections because she had strong labor, but the mother didn't feel like pushing yet because it wasn't time for the baby to be born. Just one hour later the mother felt like pushing, and the baby was born."
Baby's Head Not First

Malpositions were mentioned infrequently by women themselves as a problem or danger.

- "The baby sometimes is cross-ways, and sometimes the baby is up and down, but the legs come first."

- "Women who have long labors sometimes the bead doesn't come first, and it's difficult like someone talked about the face coming first. It's hard to deliver. . ."

- "Some women have long labors caused by breech babies. It can be dangerous."

TBAs interviewed were specifically asked what they would do if they encountered a baby who was breech or transverse lie. Four TBAs said they would attempt to move a transverse lie to a vertex position and then deliver the infant. Two TBAs had actually done this. Most of the TBAs reported that they had never seen a transverse lie, but if they did, they would advise the woman to go to a hospital. The vast majority of TBAs had experience delivering breeches and said they were usually easy to deliver. Only one stated she would refer a woman with a breech to the hospital. Trained midwives, on the other hand, were reluctant to deliver breeches at home. Some adamantly stated they sent all breeches to the hospital while others stated if the baby was small and the woman was a multipara, they occasionally delivered breeches at home. All trained midwives referred transverse lies to the hospital.
Stuck Placentas

- "Women in Cambodia face many dangers when they deliver children. After delivery [there can be] a piece of membrane or placenta left inside."
- "I saw a woman die after delivery. The TBA couldn't deliver the placenta."

While many women mentioned retained placentas as a complication, none of the 15 TBAs interviewed stated that they had ever had this problem. Some acknowledged that it could be a problem but stated they had never encountered it. Most felt that if they waited long enough, the uterus would contract and the placenta could be delivered. They felt that problems delivering placentas were due to not waiting long enough for the uterus to contract. Most stated they would either wait or gently massage or pour warm water or alcohol on the uterus to stimulate contractions. Several described vigorous massage and pushing on the fundus to expel the placenta. A few mentioned they would put their hands in the vagina to deliver the placenta. One said she would pound papaya seeds with herbs and mix them with alcohol and apply it to the woman's palms and soles of her feet to facilitate placental delivery. Trained midwives stated they would attempt to manually remove the placenta. If that was unsuccessful, they would take the woman to the hospital.
SECTION 3: POSTPARTUM PROBLEMS

Relapse

While there is no corresponding English word, toas (cn1) refers to a kind of relapse or problem after delivery. Five major types of relapse were identified in the interviews with two additional variations. Toas mehoup or camney (Tas nòt N) is relapse from eating certain foods. Toas tweeke or sawsaye (Tas eVar e) is caused from resuming working too soon. Toas damneyk (Tas dMN k) is caused from resuming coitus too soon. Toas pruey cet (Tas RBY ctp) is caused from emotional upset, sadness or worry. Toas tik pleang or tik sonsam (Tas Tkep Tks enSm) is caused by walking in rain or dew. Toas tum (Tas Tm) is relapse which lasts for a long time and can be repeated with subsequent pregnancies. This can be due to any kind of relapse, but tous tweeka and toas damneyk were most often mentioned. Toas baek srorka (Tas BkRs kAr) or dry skin relapse is not characterized by its cause but its chief symptom and actually may be a symptom of any of the five major types of relapse (Appendix J). All women interviewed knew about relapse from food and from working. The others were less widely known. Elaborate constellations of symptoms exist for each type of relapse, and many times the symptoms are the same for different kinds of toas as shown in Table 8.2. The period women are susceptible to togs seems to correlate roughly with the period of new sawsaye although toas tum doesn’t fit in that period.
TABLE 8.2. COMMON SYMPTOMS WHICH APPEAR N ME TYPES OF RELAPSE

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Relapse from: food</th>
<th>Work</th>
<th>Coitus</th>
<th>Emotional upset</th>
<th>Rain or dew</th>
</tr>
</thead>
<tbody>
<tr>
<td>headache</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>diarrhea</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>weak/no energy</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>palpitations</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>abdominal pains/cramps</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>weight loss</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>poor appetite</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Relapse from food appears to be most common. Fear of *toas* is the basis for many prohibitions during the postpartum period. Women from location to location did not usually agree on all the foods which could precipitate relapse, but several foods were reported to be dangerous in most of the areas. These foods included anything they had not eaten while roasting. Roasting appeared to confer a special protection, and women reported they tried to eat as many different kinds of foods possible while roasting so that they could enjoy a variety of foods after they finished roasting without fear of relapse.

Dangerous foods included pineapple, Jackfruit, special types of bananas (*ambong*), field cucumbers, buffalo meat, pig's bead, *kreye* (*Rkay*) fish, *diep* (*eb ob*) fish, *edor* (*emár*) fish, and red-tailed fish. Several woman said their symptoms of this type of relapse were precipitated by smelling things like rabbit roasting or a plastic bag burning.
Symptoms of relapse from food unsurprisingly were chiefly gastrointestinal like dysentery, nausea, vomiting, and abdominal swelling in addition to those mentioned above. Various women also reported symptoms ranging from stiff backbones, cramping in the chest, shaking or cramping in the extremities and tightness in the jaw to insufficient breastmilk, shivering, blurred vision, hoarseness, ringing in the ears and dry skin.

Treatment for relapse from food varied. Many types of traditional medicine made from shoots, roots and barks of trees were recommended (Appendix K). Other frequently mentioned treatments included ingestion of various combinations of porcupine stomach or ashes from the middle of the stove mixed with things. The most common treatment reported was taking the food women got the relapse from, drying it or burning it and boiling it with water or adding it to alcohol to drink.

Women universally agreed that *toas tweeka* or *sawsaye* was caused by resuming hard work too soon. What constituted hard work was not as easily defined. Cutting firewood, carrying water carts, carrying water over the shoulder, transplanting rice, washing clothes, lifting heavy things, falling down, and riding in a car were all reported to cause this type of relapse. Symptoms centered around pain in the *sawsaye* as well as pain, twitching, weakness and cramping in the extremities or joints of the extremities. In addition, generalized pain, chest pain, chills, goosebumps, cramping or shivering on the
backbone, and shaking were mentioned. Treatments were similar to those used with relapse from food.

Questions about toas damneyk (relapse from coitus) resulted either in furtive giggles or averted eyes and silence, but most woman when probed knew someone who had experienced this type of relapse. Toas damneyk was usually associated with being forced to have intercourse before the woman felt ready rather than just having intercourse while she still had new sawsaye. Thinness from toas damneyk was the chief symptom mentioned followed by dry skin and then various other nonspecific symptoms like hotness in the body, a stiff backbone, burning on arms and legs, insomnia and abdominal cramping. Treatment included taking pubic hair from the couple, burning it and mixing it with wine to drink, washing the mans penis and drinking the water used to wash it, or using traditional medicines.

Everyone agreed that toas pruey cet (relapse from emotional upset) was caused by thinking too much. Some women explained situations which had resulted in the woman having this type of relapse. All the situations centered around lack of support from her partner, the decision of her partner to take another wife or girlfriend or financial concerns. The chief symptom was weight loss. Lack of appetite and weakness were also common. Behavioral symptoms were frequently mentioned with this type of relapse. Women with this relapse were said to act frustrated, very angry, unhappy and sometimes crazy. Many respondents reported that this type of toas is untreatable or that it can be
treated but not completely cured, and that women can die from this condition.

Recommended treatments varied from having someone make the woman affected happy or having the woman stop thinking to using traditional medicines or injections.

It was interesting to contrast the trained midwives' perception of relapse with those of others interviewed. Some readily shared stories of their own experience. One midwife shared that one month postpartum she fell on stairs and hit her chest and relapsed. After visiting a private clinic for treatment she didn't feel better. Someone advised her to drink alcohol mixed with pounded turmeric leaves which she did, and then she felt better. Another suggested that women got tons only if they knew what was supposed to cause toas:

• "Toas comes from women's fear. When they eat things, they are afraid they'll get sick. But some women don't know what causes relapse. When they eat, they don't get relapse. [But] if someone sees these same women when they eat and tells them that what they've eaten causes relapse, then they are afraid. Then they have toas."

• "Some women have strong beliefs like about eating fish [believing fish will cause toas]. Other women don't know that fish causes relapse. After they eat, they don't get toas. Another woman eats that fish. Her mother sees her and says, Why do you eat this fish? It can cause relapse.' During that time the woman is afraid. She soon feels uneasy in her body."

Still another had this explanation of toas:

• "I think toas is sickness. Our bodies can be compared to a house. One house has no gate. When any animals go into the house, the ducks and chickens go away. If you have a gate to prevent animals from coming in, they can't come in. So, sickness is like this. When your body is weak and germs go in your body, you can get sick. Especially if you have a little knowledge and you believe any silly reason-like if they tell you not to eat this or that for fear of toas-and you believe them and don't dare eat anything because you are afraid of tons. So, you are tired and have no energy, and it
gets worse. Sometimes the woman has already eaten something and they tell her that thing can cause toas. Then she becomes afraid she will have toas."

Others echoed the idea that you can only get toas if you believe in toas--"it depends on if the women believe the old ladies."

**Priey Krawlah Pleung**

*Priey krawlah pleung* is a condition which clearly illustrates how Khmer do not separate spiritual from physical pathology. Literally, this condition refers to a spirit which comes to bother a woman while she is roasting. The most common manifestations are either seizures, fainting, losing consciousness or in some way acting crazy--eating sleeping mats, walking around nude, speaking nonsense, becoming very angry or violent. Many of these symptoms could also be interpreted as coming from hypertensive disorders of pregnancy, sequellae of anemia and postpartum hemorrhage, high fever or extreme anxiety and psychological trauma (Appendix L). When queried, many women and TBAs thought that *priey krawlah pleung* was the same as seizures. The effects of constantly drinking Khmer medicine mixed with alcohol during the three days of roasting over a hot fire in a tropical climate may be linked to some of the symptoms described as *krawlah pleung*. Some women said they didn't believe ghosts or spirits caused it, and it came when women had severe swelling during pregnancy or had membranes or blood left inside, which could indicate woman had either experienced pregnancy induced hypertension or a postpartum hemorrhage. Trained midwives stated that what Khmers called *priey krawlah pleung*, according to textbooks, was caused by...
high blood pressure made worse by roasting and drinking and eating salty things (i.e., pregnancy induced hypertension or pre-eclampsia). An urban woman, a TBA, and two trained midwives reported the following:

- **Woman:** "Khmers say that they have a ghost or spirit or witch which comes in the body and eats pus and blood. It causes priey krawlah pleung. . . Whether this is true or not I don't know. I've just heard. . . Priey krawlah pleung is caused by witches. They like blood. They come to eat blood. During that time they come in our body. So, after delivery they take thorns to put under the bed because the witches are afraid of thorns. Sometimes witches, sometimes ghosts and other spirits—I don't know their names—can cause priey krawlah pleung."

- **TBA:** "When I return [after delivery] I ask her, 'How is your body? Have you had palpitations?' If she answers no, then I palpate the abdomen and massage to take the blood out, and I check her face because I am afraid that a ghost or spirit can come to scare her. When a ghost or spirit comes to scare her, a woman's eyes roll back. This can cause priey krawlah pleung or seizures while she's roasting."

- **Midwife:** "Yes, in the countryside there is priey krawlah pleung. After delivery they roast and put thorns under the bed. They are afraid of having spirits or witches come. While roasting they forbid you to say crazy words (piles pdas): They are afraid whatever you say will happen. In my opinion, a woman may have the disease of salty urine [proteinuria]. Roasting causes her to say crazy words or see this or that. During the Pot Pot regime I saw this."

- **Midwife:** "Priey krawlah pleung happens to women who have swelling during pregnancy and high blood pressure. They call it eclampsia. It is krawlah pleung. Krawlah pleung is caused from having a piece of placenta left inside after delivery. In the hospital after delivery they do manual curettage to make the uterus small. If you don't do manual curettage to take the blood out, the uterus is big and can't contract. The blood flows out. When the blood flows the disease can go inside. Then women have fever. They say crazy words (piles). She has salty urine and can seize and say crazy words. The old women say this is caused by ghosts or spirits. It makes a woman have blurred vision, high fever. The old women say women say crazy words because the spirit comes in and says those words. Then they bring a woman and hit her to make the spirits go out. In the Pot Pot regime I saw a woman after delivery who always had fever-constant fever. She said crazy words. Then they brought her to roast, and they made a lot of fire. It was very hot and was very

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6 This is referring to pregnancy induced hypertension or pre-eclampsia.
smoky. They took a mat and covered her [with it]. When the woman was hot, she moved. Then they pressed her down and told her not to move and said to her, "Go away! Go away!" [to the spirit] The woman always said, "No! No.'" This was the reason this woman became crazy."

Prevention measures for this type of relapse depend on the person's belief about its cause--whether physical or supernatural. Trained midwives stressed prenatal care with frequent checks of blood pressure and urine, low salt diets, diuretics and manual removal of blood from the uterus postpartum. The majority of TBAs and women felt that tying strings around their waist or wrists, painting lime paste crosses in corners of their houses or on their necks or ankles, putting thorns beneath the roasting bed, or having the kruu kmae or TBA either recite incantations around their roasting beds, pour lustral water over them, or spit and blow were effective measures to prevent attack from ghosts or spirits. Additional prevention strategies included having the TBA "take all the blood out" after delivery, making sure women on the fire were never alone or never suffered emotional upset and keeping new mothers from hearing bad words like "hot" or "fire."

- "They prevent priey krawlah pleung by calling the kruu kmae to put a string around the waist and pour water during pregnancy. After delivery the old women forbid a woman to stay alone. The TBA takes the blood out. Then they call the kruu kmae to recite incantations to prevent ghosts or spirits from coming to frighten."

- "While roasting the old women forbid women to go outside the room they're roasting in. They're afraid of priey krawlah pleung. Like for me, the old women advised me not to think a lot. If I thought a lot, it would cause the blood to move upwards and cause priey krawlah pleung. In my opinion, priey krawlah pleung is caused by the TBA not taking all the blood out. The blood left inside causes you to cramp. If they have a problem like this, the kruu kmae calls it priey krawlah pleung. It's caused by spirits."
Treatment for *priey krawlah pleung* ranged from use of diuretics, injections and IVs to massaging or manually removing the blood, towering the heat of the fire or removing the fire from beneath the bed, having the traditional healer blow, spit and recite incantations, burning incense and making offerings to the woman's ancestral spirits. More unusual cures included spitting chewed black pepper into the woman's eyes or *having* the woman drink a mixture of burned chicken feces and wine.

One woman described her experience:

- **Woman:** "I am young. I know about *priey krawlah pleung* too but not as much as the old women. After delivery you roast. When you're roasting you feel weak and have no energy. During that time a ghost comes to cover you and you faint. After delivery I roasted. I felt sleepy, couldn't open my eyes. Then I saw a big hand come to cover my face. During that time I tried to wake up and sit up. Then it went away. Once it left there was no problem. When it came to cover me if I didn't try to wake up and sit up, it would have covered me."

- **Interviewer:** "What happened when you had *priey krawlah pleung*?"

- **Woman:** "At first I felt sleepy. I had no energy. I had weakness in my arms and legs."

- **Interviewer:** "How did you treat this?"

- **Woman:** "The *kruu kmae* came to recite incantations. After delivery when I roasted he came to recite incantations around the bed and put thorns beneath the bed. When I had *priey krawlah pleung* I didn't get any treatment. After that (the *kruu kmae*'s recitation) I felt better."

**Stuck Blood**

In most of the FG discussions, the idea emerged that blood could get trapped inside the uterus after delivery and cause the woman problems. Small amounts of

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**Notes:**

47 The speaker was a 25 year old who had delivered two children and was pregnant with her third.

48 In Khmer the word "cover," (krob) when used to refer to ghosts, has the connotation of eventually leading to loss of consciousness and death.
postpartum bleeding are felt to be unhealthy because if the woman doesn't bleed
"enough," she probably has blood trapped inside. Women believe this condition is both
uncomfortable and dangerous since ghosts or spirits may be attracted to blood inside the
uterus.

• Midwife: "Our peel are afraid when a woman has a lot of bleeding, but the old
women say a lot of bleeding is good. They say the bad blood comes out. According
to the peet a little bleeding is better. The old women don't know that a lot of bleeding
can cause a woman to have no energy. They only know that a lot of bleeding is good
because bad blood comes out."

• Woman: "After delivery if you don't have a lot of bleeding, you can have a lot of
problems because all the blood doesn't come out. I was afraid after delivery when I
had a little bleeding. I found Khmer medicine to make the blood come out."

• Interviewer. "Why do you need to have a lot of bleeding?"

• Woman: "I don't know, but my parents told me that after delivery all the blood
needed to come out to make my body all right. If all the blood didn't come out, I
wouldn't be all right."

Both women and TBAs reported that not bleeding enough led to symptoms
including dizziness, blurry vision, uterine pain and cramping, fever, headache,
palpitations, weakness and chills.

• "With my last child I had a problem. After delivery the, midwife didn't take out
blood. I didn't have blood come out. It caused swelling in my abdomen."

Some women reported that the blood could move upwards and cause an obstruction.
Ultimately, if left untreated, many women explained that this stuck blood could cause
priey krawlah pleung, seizures or death.

• "With my third child, I had a problem. Three days after delivery I had cramping
which moved upwards. I had chills and fever. I became unconscious. The old
women said, "priey krawlah pleung." This was while I was on the fire (i.e., roasting).
This was during the Pol Pot regime. I didn't have any medicine. The TBA inserted
her hands and took out the blood and gave me Khmer medicine to drink. Then I felt better but I didn't have energy. I didn't have energy for many days."

"Some immediately after delivery don't have any bleeding, and the blood goes up. This can cause priey krawlah pleung."

"I heard [about a woman who] didn't have blood come out after delivery. Then she had a fever. During that time the TBA took the blood out, The priey krawlah pleung went into her body and caused this woman to seize. Some women die [from this]. Some live."

TBAs and women are very concerned that all the blood "come out" after delivery because of the danger of priey krawlloh pleung. While most TBAs stated they removed the blood by massaging the uterus, others put their fingers inside the vagina or sometimes inside the uterus to remove clots of blood. In addition to giving a massage and at rimes manually removing blood immediately after delivery, TBAs and midwives massage the woman's uterus on their daily postpartum visits for the first three days after delivery. Usually the practice of massage combined with roasting, which is believed to prevent the blood from clotting, insures that the woman bleeds "enough." If the woman feels she isn't bleeding enough, treatment is sought from traditional healers, injectionists, drug sellers or trained health workers.

- Woman: "After delivery I didn't have bleeding. I called the kruu kmae named Leng to help. During that time we didn't have a kruu peel like now. He brought prokrok root to cut in small pieces and boil with water. He gave it to me to take. I drank one whole clay pot. Then I began to bleed, and my headache and palpitations stopped.

- Interviewer: Why did you drink this medicine?

- Woman: "I drank this medicine to make blood come out because after delivery I didn't have enough bleeding. Because I didn't have bleeding, I didn't feel well."

- "Women with just a little bleeding don't have energy. If you have a lot of bleeding, it's no problem. It's good for the body. Like with Mrs. Khim, Mr. Chhoeun's wife."
She had a little bleeding after delivery. After a month she was uncomfortable inside her body. Then they brought her to the hospital. The peel took out blood. When you don't take all the blood out, it causes you to be uncomfortable. They said there was a blood clot inside. The peel took all the blood out, and then she was comfortable, no problem."

- "I had a problem after the delivery of my fifth child. Ten days after delivery I had burning pain. I asked a woman who sold Khmer medicine. She said that all my blood hadn't come out. During that time ten days after delivery I had stopped bleeding. I bought the medicine to boil with water and drink. Then blood came out for three or four days more."

- "If a woman has blood left inside, she gets cramping in her abdomen and needs the TBA to massage to make the blood come out. Then the cramping will stop. Some will get injections if they have money."

- "If you have blood left inside, you feel weak, feverish and have no energy. Then you find Khmer medicine to drink to make all the blood come out. You'll feel better--no problem."

- Interviewer: "If you don't have a lot of bleeding, what happens?"
- TBA: "Women can have fever. Sometimes when you give calcium injections the blood comes out-no problem."
- Interviewer. "What does the calcium do?"
- TBA: "Calcium is a "hot" medicine. It snakes the blood come out."

Confusion existed in the minds of some women between the difference between retained membranes and retained blood. Most women, however, understood the distinction. Both of these conditions were felt to be dangerous. Symptoms reported for stuck blood, particularly those of dizziness, palpitation, fainting and headache, could be due to severe anemia due to an occult hemorrhage if the woman was bleeding internally. Other symptoms like pain in the uterus could be attributable to normal "after pains"49

49 Uterine contractions which occur after delivery.
which are especially uncomfortable for multiparas. Some of the fever, chills and abdominal swelling could be due to an subinvolution and infection if indeed membranes were retained or if the birth attendant introduced infection when she did a manual exploration or removal of the placenta after delivery.

SECTION 4: MATERNAL DEATHS

Both the FG discussions and individual interviews reinforced the common perception that levels of maternal mortality and morbidity are high in Cambodia. Indeed, 73 maternal deaths were discussed by the 129 women who participated in FG discussions and individual interviews. Almost everyone interviewed knew of at least one woman who had died as a result of pregnancy. When women were asked, "What is the biggest danger for Khmer women during pregnancy, birth and postpartum?" or "What did you fear during pregnancy?" the overwhelming response was that women were afraid they would die in childbirth.

Causes of death presented in Table 8.3 were assigned after reading women's descriptions from the individual interviews and FG discussions. Categories were assigned jointly by the researcher, a nurse midwife, and by an obstetrician gynecologist; Further description of the folk explanation and biomedical signs and symptoms for those in the "unknown" category are found in Appendix M.
TABLE 8.3. CAUSES OF MATERNAL MORTALITY

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Percentage (number)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>29% (21)</td>
</tr>
<tr>
<td>Retained Placenta/Postpartum Hemorrhage</td>
<td>26% (19)</td>
</tr>
<tr>
<td>Prolonged/Obstructed Labor</td>
<td>19% (14)</td>
</tr>
<tr>
<td>Pregnancy Induced Hypertension</td>
<td>7% (5)</td>
</tr>
<tr>
<td>Ante Hemorrhage</td>
<td>7% (5)</td>
</tr>
<tr>
<td>Complications of Induced Abortion</td>
<td>5% (4)</td>
</tr>
<tr>
<td>Severe Anemia</td>
<td>4% (3)</td>
</tr>
<tr>
<td>Infection</td>
<td>3% (2)</td>
</tr>
<tr>
<td>Total</td>
<td>100% (73)</td>
</tr>
</tbody>
</table>

The women's categories overlapped with biomedically assigned categories in many cases. Emic categories which differed from biomedical categories were found most often in the "unknown" category. Priey krawlah pleung, however, was cited by women as cause of death in cases which were assigned to the biomedical categories of prolonged/obstructed labor, pregnancy induced hypertension and retained placenta/postpartum hemorrhage. Further analysis of cases in the unknown category revealed that nine of these 19 deaths could be explained by using emic diagnoses.

Women attributed five of the 19 deaths to ghosts, spirits or specifically priey krawlah pleung. Four more deaths were attributed to the folk category of toas or relapse-relapse from walking in the dew, relapse from coitus and relapse from food.
CHAPTER 9: CONCLUSION, DISCUSSION, AND RECOMMENDATIONS

This study has described beliefs Khmer women hold about pregnancy and complications of pregnancy and practices they follow. In Section 1 findings of this study will be compared with studies from other Asian cultures. Section 2 contains a summary of the findings, implications of this study for maternal health in Cambodia and specific recommendations for training of women's health care deliverers, program planning and future research.

SECTION 1: MDDINGS COWARED TO OTHER ASIAN CULTURES

Many of the beliefs Khmer women hold and practices they follow are similar to those of other Asian cultures. The idea of pregnancy being a "hot" state and postpartum being a "cold" one necessitating dietary change has been described in studies of Indian women in South Africa (Chalmers, 1993), Vietnamese women (Manderson & Mathews, 1981), Taiwanese women (Pillsbury, 1982), Malay women (Laderman, 1982; Wilson, 1973) and Bangladeshi women (Goodburn, Gazi & Chowdhury, 1995). The concern about maintaining balance by providing extra heat for postpartum women has been documented in studies of Hmong women (Jambunathan, 1995), Roglai tribal women in Vietnam (Lee, 1972), Korean women (Kendall, 1987), Lao women (Escoffier-Faveau, Souphanthong & Pholsena, 1994; Robertson, 1984), Malay women (Laderman, 1982; Wilson, 1973), Northern Thai women (Muecke, 1976), and Vietnamese women (Manderson & Mathews, 1981; Tran, 1994). Postpartum taboos including taboos against
coitus, certain foods and activities are also found in Vietnamese, Malay, Roglai, Lao, Bangladeshi, Korean, Northern Thai and South African Indian cultures.

Some of the emic complications of pregnancy, delivery and postpartum and emic treatment modalities are also found in ethnographic studies of other cultures. Postpartum coldness is considered a problem in all the cultures where restoring heat to newly delivered women is practiced. In some cultures, this consists of roasting practices similar to those of Khmer women. The idea that postpartum bleeding is beneficial to cleanse the birth passage of "bad blood" has been reported among Bangladeshi (Goodburn et al., 1995), Malay (Laderman, 1982), Vietnamese (Tran, 1994), tribal Vietnamese (Lee, 1972) and Lao women (Robertson, 1984). Spiritual explanation of physiological conditions like seizures were also found in other cultures. In Bangladesh women felt that eclampsia was due to spirit possession (Blanchet, 1991; Goodburn et al., 1995). Prolonged labors were felt by Roglai women to be due to a jealous sorcerer (Lee, 1972). Use of mantras, incantations and special water, amulets, herbal teas and medicines to treat obstetrical complications have been reported in studies of Lao (Escoffier-Faveau et al., 1994; Robertson, 1984), Malay (Laderman, 1982), Bangladeshi (Goodburn et al., 1995) and South African Indian women (Chalmers, 1993).
SECTION 2: DISCUSSION OF FINDINGS AND RECOMMENDATIONS

In this section I summarize emic categories and emic practices of Khmer women and discuss the implications of these for training health workers. I then discuss three themes which emerged from the data, practitioner choice, pragmatism and prevention, and make recommendations for use of these concepts. Finally, I make recommendations for future research. One limitation of this study is its relatively small sample size. Because of the limited number of women actually interviewed, results and recommendations discussed in this section must be interpreted with caution.

Emic Categories

In this report I have described emic taxonomies Khmer women use to categorize normal and abnormal conditions of pregnancy. During the antepartum period women categorized "bleeding to wash the baby's face", "swelling from the baby" and siet sork pain as normal. Women categorized types of swelling (not from the baby) and bleeding (not to wash the baby's face) as abnormal complications of pregnancy. While siet sork pain appeared to correspond to ligament pain and other musculoskeletal pains considered normal during pregnancy, some of the definitions for bleeding to wash the baby's face and swelling from the baby would be considered obstetrical complications by biomedical categorization. The intrapartum emic categories for abnormal conditions, prolonged labors, malpresentations, and retained placentas, are congruent with biomedical categories of intrapartum complications. New sawsaye was explained as a normal
postpartum condition and stuck blood, *priey krawlah pleung* and relapse as abnormal conditions. While it is in no way complete, Table 9.1 lists some possible biomedical conditions associated with these emic conditions.

**TABLE 9.1 POSSIBLE BIOMEDICAL CONDITIONS ASSOCIATED WITH EMIC CONDITIONS**

<table>
<thead>
<tr>
<th>EMIC CONDITION</th>
<th>TLNIE</th>
<th>BIOMEDICAL CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLEEDING TO</td>
<td>Antepartum</td>
<td>• Implantation spotting</td>
</tr>
<tr>
<td>RASH THE BABY’S FACE</td>
<td></td>
<td>• Cervicitis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Threatened abortion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Placenta previa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Placental abruption</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Blood show</td>
</tr>
<tr>
<td>SWELLING FROM THE BABY</td>
<td>Antepartum</td>
<td>• Physiological edema of pregnancy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Hypertensive disorders of pregnancy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Severe anemia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cardiac problems</td>
</tr>
<tr>
<td>SIFT SORK PAIN</td>
<td>Antepartum</td>
<td>• Round or broad ligament stretching</td>
</tr>
<tr>
<td>RELAPSE</td>
<td>Postpartum</td>
<td>• Pressure of fetus</td>
</tr>
<tr>
<td>PRIEYKRAHZAH PLEUNG</td>
<td>Postpartum</td>
<td>• Infection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Anemia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Postpartum depression</td>
</tr>
<tr>
<td>STUCK BLOOD</td>
<td>Intrapartum/</td>
<td>• Hypertensive disorders of pregnancy</td>
</tr>
<tr>
<td></td>
<td>Postpartum</td>
<td>• LOC(^{50}) due to hemorrhage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Infection with high fever</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Extreme anxiety</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Psychological trauma</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Severe anemia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Occult hemorrhage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• After pains</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Infection</td>
</tr>
</tbody>
</table>

\(^{50}\) LOC refers to loss of consciousness.
Since many serious biomedical conditions are explained using emic vocabulary or are associated with emic categories, knowledge of these should be requisite for those in the professional sector providing care to Khmer women. During the course of the research, when we asked about the relapse caused by emotional upset, women repeatedly mentioned that one of its chief symptoms was weight loss and that it was often fatal. The research assistants working with me immediately suspected that tuberculosis was the probable cause of death for these women and after more detailed questioning, this assumption was corroborated. Women who complain of priey krawlah pleung may have problems ranging from inebriation, eclamptic seizures or high fever to loss of consciousness from postpartum hemorrhage. If caregivers ignore or dismiss women presenting with complaints of emic conditions or symptoms described in emic terms, they are at risk of missing serious problems. If caregivers do not carefully consider and investigate these complaints, they are also alienating women from the formal health care system since those in the traditional system do pay attention to and treat these conditions.

Strong traditional beliefs exist surrounding pregnancy and childbirth that affect how women view complications. Some beliefs uncovered in this study have prevented women from seeking timely intervention for problems best treated by the formal sector such as beliefs about antepartum swelling and bleeding, stuck babies (prolonged labor), priey krawlah pleung, postpartum bleeding, relapse and the need for roasting and injections to restore heat postpartum. Any strategies for changing these beliefs or the
practices surrounding these beliefs will need to incorporate Khmer views and vocabulary. For example, most women in the study thought that postpartum bleeding was cleansing and therefore desirable. Postpartum hemorrhage is a leading cause of maternal mortality for Khmer women, but Khmer women often bleed in amounts which endanger their health before measures are taken to stop the bleeding. To assure the success of any interventions aimed to decrease deaths from postpartum hemorrhage, change agents need to acknowledge the cultural belief-that it is good to have bleeding to get rid of the "bad" blood-before proposing guidelines for what to consider excessive bleeding and when women should seek professional sector care.

Similarly, women who think that swelling from the baby is inevitable and indeed a signal that the baby will be born soon do not view it as a problem. If the concept of swelling from the baby is further refined, however, it could be used to differentiate normal physiological edema of pregnancy from other dangerous forms of edema. That is, the emit concept of hoem koon (swelling from the baby) could be "reloaded51" and used only to describe dependent edema on the legs not accompanied by headache, blurred vision or swelling elsewhere. Similarly, bleeding to wash the baby's face could be reloaded to refer only to bleeding which lasts one day or less, is not bright red, is less than a period and is unaccompanied by cramping. Culturally both of these terms have a

51 I am referring here to taldag an emit term whose meaning is close to a biomedical term or teens and adding to or slightly altering the meaning so that it is equivalent to the biomedical term/s. Swelling from the baby would be reloaded to mean physiological edema of pregnancy. Bleeding to wash the baby's face would be reloaded to mean implantation spotting or bloody show.
connotation of normal. By reloading the existing terms, so that they include what is biomedically considered normal, woman may be more amenable to seeking care if their condition differs from the reloaded definition.

Emic Practices

In the course of this research some traditional practices emerged which are not adaptive from a biomedical perspective while other practices emerged which are adaptive and need to be encouraged. Some practices were found which are potentially detrimental, and further study is needed to determine their effect. A summary of these practices is contained in Table 9.2.

**TABLE 9.2 TRADITIONAL PRACTICES**

<table>
<thead>
<tr>
<th>ADAPTIVE</th>
<th>QUESTIONABLE</th>
<th>MALADAPTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Avoidance of heavy physical labor when possible during pregnancy</td>
<td>• Use of some traditional medicines.</td>
<td>• Injections of unneeded medicines with unsterile needles and syringes.</td>
</tr>
<tr>
<td>• Practice of ambulation and continued eating while in labor. Medicines with alcohol</td>
<td>• Ingestion of high salt diet postpartum.</td>
<td>• Manual removal of blood during the second stage.</td>
</tr>
<tr>
<td>• Practice of postpartum checks for 3 days.</td>
<td>• Drinking large amounts of Khmer while roasting.</td>
<td>• Roasting with coexisting problems.</td>
</tr>
<tr>
<td>• Supportive presence of friends and family during delivery.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Postpartum uterine massage &quot;to get all the blood out.&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Traditional Khmer labor management, the practice of encouraging of continued activity and ambulation and eating or drinking small amounts of normal foods until labor pains are very strong, has been found to have no adverse effects on normal labors and may indeed even facilitate labor progress (Crreulich et al., 1994). The practice of having supportive friends and family present has been shown to be associated with better labor and birth outcomes (Hofmeyr, Nikodem, Wolman, Chalmers & Kramer, 1991; Klaus, Kennell, Robertson & Sosa, 1986).

Avoidance of heavy physical labor in later pregnancy may also be beneficial especially since many Khmer women are anemic and have borderline nutrition-52. Uterine massage postpartum to facilitate contraction is very important in Cambodia where many women are multiparous and have anemia. The practice of home visits for at least three days postpartum to check on the woman is also potentially helpful in early assessment of postpartum complications.

Three practices emerged which may potentially be dangerous and need further investigation. Khmer women use many traditional medicines during pregnancy and postpartum. While several groups in Cambodia are beginning to systematically collect, identify, and investigate the pharmacological effect of these medicines, at present women may be using medicines which are teratogenic or otherwise harmful. Women reported eating foods during the postpartum period which were prohibited during pregnancy, foods that were "hot", spicy, or salty. While ingestion of large amounts of salt may not

52 According to LNICEF (1996a), Khmer's daily intake on average contains only 96% of the calories needed for adequate nutrition.
be problematic for normotensive women, it may be dangerous for women with borderline hypertension. Similarly ingestion of large amounts of alcohol, a diuretic, while roasting may further dehydrate some women. These three practices may be harmless in some cases but dangerous in others. Further study is needed.

Throughout pregnancy and during postpartum deserves attention. While most of the medicines reported by women in this study were innocuous in the doses injected, the background prevalence of hepatitis and HIV combined with the widespread lack of knowledge of sterile technique make this practice especially dangerous. Education campaigns and training of all levels of health care providers need to stress the danger of this practice and reinforce the idea that proper diet and treatment of anemia and infectious diseases will do more in the long term to restore energy than injections.

Both traditional birth attendants (TBAs) and trained midwives in this study reported the practice of prophylactically sweeping the vagina or uterus with their fingers to remove blood after the placenta has delivered. While manual exploration of the uterus is an accepted procedure if placental fragments are believed to be inside the uterus, it is a painful procedure for the woman and potentially introduces microorganisms into the reproductive tract. Considering the delivery site for most Khmer women, it is a practice which could easily lead to puerperal infection. Proper use of this procedure in situations of postpartum hemorrhage, when retained placental fragments are suspected, should be
taught to birth attendants. It should be emphasized, however, that this is not a routine procedure and that its unwarranted use can be dangerous.

While the practice of roasting is declining in urban areas, 88% of Khmer women live in rural areas where it is still widely practiced. Many of the traditional medicines ingested during the postpartum period are mixed with alcohol. Certainly use of these traditional medicines is potentially dangerous given the diuretic effect of alcohol by women who are roasting over hot coals. In addition, the risk to health may be compounded for women who are anemic or who have elevated blood pressure. Guidelines for who should not roast should be included in the training of TBAs and midwives practicing in rural areas, and culturally acceptable substitutes should be recommended like use of hot rocks, ice, steaming and drinking Khmer medicines known to be beneficial.

Practitioner Choice

It became clear during the course of this study that certain traditional practitioners were sought for certain conditions during pregnancy. This was especially true in the traditional sector. TBAs were viewed as guardians of the gravid abdomen, and their expertise in being able to massage the fetus into a "straight" position and thus alleviate siet sork pain was highly valued by pregnant women. Traditional healers (kruu kmae) were prized for their knowledge of the supernatural world and their ability to protect
women from its dangerous forces during pregnancy, delivery and postpartum. Women also stated they consulted kruu kmae for advice about traditional medicines. Several of the TBAs interviewed stated that they were also knowledgeable about means of spiritual protection and types of traditional medicines and that women requested amulets, incantations and traditional medicines from them. The advice of traditional healers appeared to be sought for specific problems like prolonged labor and priey krawlah pleung. I cannot make specific statements about conditions for which women sought advice or treatment from practitioners in the professional sector. Many women interviewed lived far from any clinics or hospitals or felt that they could not afford formal sector services and would not consult them except for dire obstetrical emergencies. From this research it is impossible to determine if women would prefer the services of professional providers if barriers of cost and distance were removed.

Innocuous and beneficial practices of practitioners in the traditional sector need to be supported like the TBAs expertise in massage and the kruu kmae's expertise in spiritual protection. At present the majority of rural women obtain most of their obstetrical care from these care providers. TBAs and pregnant women and their families, however, need to be alerted to the need for care from the professional sector for obstetrical complications and emergencies like prolonged labor, hemorrhage and severe swelling. Mass education efforts need to focus on common causes of maternal mortality
so that these conditions are recognized in time to allow travel to appropriate settings for.

treatment.

Pragmatism

While women do seem to prefer certain traditional care providers for specific conditions, women also appeared to be pragmatic and would mix and blend treatment modalities from both the traditional and professional sectors to gain the desired effect. This notion of pragmatism has also been noted among Khmer refugee women in U.S. (Frye, 1989). Circumstances surrounding the condition and outcomes as well as beliefs often influence choice of provider and treatment modalities. Therefore, if a woman believes coldness is a real postpartum complication, if she lives with her nuclear family in the city, if her husband is a day laborer, and if firewood is very expensive, then she may decide to inject "hot" medicines rather than roast. Or if she is in labor for three days, the *kruu kmae* has chanted incantations and blowm and spit over her, the TBA has massaged, and the baby has still not delivered, then she and her family may decide to travel to the nearest hospital and see what the *peet* can do. This pragmatism can potentially be used to encourage Khmer women to access the professional sector for emergency obstetrical conditions if they see positive results from the care they receive.

Prevention

The idea of prevention appeared repeatedly in data from all the focus group (FG) discussions and interviews. Pregnant women and postpartum Khmer women actively
engage in practices or seek advice to prevent selected complications. Before delivery women follow prescribed behaviors to prevent the baby from becoming too hot, to prevent attack from ghosts or spirits, and to prevent slow births, big babies or dirty babies. Postpartum women roast to prevent stuck blood, place thorns under the roasting bed to prevent priey krawlah pleung, and avoid dangerous foods and heavy work to prevent relapse.

Since the idea of prevention is so strong in Khmer culture, it is possible that other prevention ideas could be introduced. For example, while the notion of antenatal care as practiced in Western countries is not familiar to most Khmer women, the idea of protecting your pregnancy (kapia preah puah) emerged as a strong cultural construct. This construct could be used in public campaigns to encourage women to seek antenatal care. The idea of kapia preah puah could also be enlarged or reloaded to include elements such as tetanus vaccinations, iron prophylaxis and encouragement of high risk women to deliver with more trained care providers.

Further Research

In no way are the beliefs and practices surrounding pregnancy described in this study exhaustive. Several emic categories emerged near the end of the research which I was unable to explored in detail. Khmer women have a rich and colorful vocabulary for the contractions they experience in labor (Appendix N). These words for the chuu(pains) of labor were described best by elderly rural TBAs, and there appeared to be wide
geographic variation in terms used. Common terms may exist which denote true, false, early, and hard labor. I was unable to determine those distinctions. If they exist, however, they would be useful for developing definitions of prolonged labor. Similarly, many words exist for massage and manipulation of the gravid abdomen during pregnancy and delivery (Appendix 0). Some TBAs reported that they push down on the fundus while the woman delivers. Others denied that they pushed down but said they "held" the uterus in place so that the baby couldn't go back upwards. I was unable to find agreement on the terms used or to determine if these were common practices. Forceful pushing on the fundus during labor and delivery is a potentially dangerous practice and should be discouraged. More research is needed, however, to clarify common terms.

Similarly, the vast array of traditional medicines used by TBAs and kruu kmae should be studied in depth. Many plants used in Cambodia are used in other parts of Asia and Africa and have proven beneficial effects. Certainly, the use of traditional medicines which stimulate uterine contractions or which have antiseptic properties would be beneficial in the postpartum period.

Finally, diet in the postpartum period should be studied in more detail. For mildly pre-eclamptic women, ingestion of a high sodium diet during a time they may be dehydrated due to roasting and alcohol ingestion could be dangerous. The prohibition of vegetables in the postpartum period may be only in certain geographic areas. Nonetheless, further investigation of this is needed considering the high prevalence of
low grade vitamin A deficiency. If it appears to be widespread, endorsement of safe "hot" vegetables may be considered.

Conclusion

Cultural beliefs and practices change as society changes. Khmer culture is not a static entity. Traditional practices have evolved over time as a way of dealing with realities people encounter. Certainly TBAs in rural Cambodia have for the most part had little alternative to relying on what "the old women said." They have lived and practiced in communities where access to emergency obstetrical care was either unavailable, inaccessible, unaffordable or of such poor quality that it wasn't considered worth accessing. Women have sought their services when no other services were available. While some of the practices are dangerous when compared to cosmopolitan therapeutic alternatives, they seem to have evolved out of a desire to do something when there were no other options available.

Cambodia is just now emerging from over two decades of extreme isolation from most of the world. This study is one of the first to describe current beliefs and practices of Khmer women surrounding pregnancy and birth. While the results of this study can be used to fill gaps in understanding and will be of interest to anthropologists and other students of Khmer culture, these results can also be used to inform those determining health policy and planning health programs to decrease maternal mortality.

Countrywide surveys indicate that Cambodia has a level of Vitamin A deficiency classified by R140 as a public health hazard (Ministry of Health, 1994).
Cambodia faces many challenges if it is to successfully address the issues of maternal mortality in the coming decades. Chief among those will be to train workers, design programs and strengthen the formal health system in such a way that the care available to Khmer women is both culturally competent and biomedically safe. Those involved in training and program planning would do well to heed Paul's (1955) sage advice, which I paraphrase-if you wish to help Khmer women improve their health, you must learn to think like Khmer women. In order to effectively address the issues of maternal mortality in Cambodia, health care workers must be trained and women's health programs must be designed with an understanding of the beliefs and practices of Khmer women.
APPENDIX A

GUIDELINES FOR FOCUS GROUP QUESTIONS

A. LABOR
1. How do you know when labor starts? How can you tell it's true labor?
2. What do you like to do during labor?
3. Tell us about your last labor from when the labor pains began. (Probe: position, activity, diet, support people).
4. What problems can women have during labor? (Probe: Have you any problems? Have you ever heard of anyone having problems?)
5. What do you do for these problems? Who does it? Who do you see?
6. How long should a labor last before a baby is born? What is a normal length of time to have contractions before the baby is born?

B. DELIVERY
1. How does a woman know it is time for the baby to be born?
2. Who would you like to be with you during delivery? What do they do?
3. When do you want them to come?
4. What happens during delivery? OR Tell us about your last delivery. (Probe: How was baby delivered, position of mother, how and when was the cord cut, how and when was the placenta delivered).
5. What kinds of problems can women have during delivery? (Probe: Have you ever had any problems? Have you ever heard of anyone having problems?).
6. What should you do/have you done for these problems? Who does/did it?

C. GENERAL
1. What is the optimal age for marriage?
2. What is the optimal age to have your first child, or when after marriage is it best to have your first child?
3. What is the optimal number of children? (Probe: How many do you have? Would you choose to have the same number again?).
4. What causes pregnancy (fertilization)?
5. When is a woman able to get pregnant (times of fertility)? (Probe: Why is it that a woman can sleep with her husband some days and get pregnant and other times sleep with him and not get pregnant?).

D. PREGNANCY
1. How can a woman know that she is pregnant?
2. How long should a normal pregnancy last?
3. How can you tell everything is normal with a pregnancy? (Restate: What changes in a woman's body are normal in pregnancy?).

4. How can you tell if things are not normal with a pregnancy? (Restate: What changes in a woman's body are not normal in pregnancy?).

5. What kinds of problems can pregnant women have? (Probe: What kind of problems have you had or have you heard about?).

6. Who helps pregnant women?

7. Who do you see for which problems?

8. What should they do for these problems?

9. Is it normal for a woman to swell during pregnancy? When is it not normal?

10. Is it normal for a woman to bleed or spot during pregnancy? When is it not normal? 11. How do you protect a pregnancy?

12. What things should pregnant women eat/drink and not eat/not drink?

13. What specific activities should pregnant women do/not do?


E. POSTPARTUM

1. What happens to you immediately after delivery? (Probe: position, activity, diet [what was the first food you wanted to eat after delivery?], bathing [when do you first bathe after delivery?], roasting, use of traditional medicines, wardrobe).

2. What should you eat/drink or not eat/drink after the baby is born?

3. What should you do/not do after the baby is born?

4. What is a normal amount of bleeding after delivery? (Probe: How much did you bleed (measured in handfuls, times changed a sarong/day)? Was it normal?).

5. How long should a woman bleed after delivery?

6. What problems can a woman have after the delivery? (Probe: What problems have you heard about or experienced?).

7. What should you do/have you done for these problems? Who did it?
## APPENDIX B

### FOCUS GROUPS--SITES, DATES AND NGO CONTACTS

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>SITE</th>
<th>DATE HELD</th>
<th>NGO CONTACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>pilot</td>
<td>SROK MEANCHEY, KANDAL</td>
<td>2/20/95</td>
<td>SERVANTS</td>
</tr>
<tr>
<td>1.2</td>
<td>SROK PREAH SDACH, PREY VENG</td>
<td>3/14/95</td>
<td>WORLD CONCERN</td>
</tr>
<tr>
<td>1.3</td>
<td>SROK PREAH SDACH, PREY VENG</td>
<td>3/24/95</td>
<td>WORLD CONCERN</td>
</tr>
<tr>
<td>1.4</td>
<td>SROK PREY VENG, PREY VENG</td>
<td>4/26/95</td>
<td>CHRISTIAN OUTREACH</td>
</tr>
<tr>
<td>2.1</td>
<td>SROK OUDONG, KAMPONG SPEU</td>
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APPENDIX C
MMDUAL Interviews-Sites, Dates and NGO Contacts

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* wo-women **mw-midwives
APPENDIX D

VERBAL CONSENT

FOR FOCUS GROUPS
We were told by _(name of contact)_ that you have recently had a baby and might be a good person to talk with. We are trying to learn about pregnancy and childbirth in Cambodia. We are talking to women in Prey Veng, Kampong Speu and Pursat provinces and Phnom Penh about their experiences. We would like to invite you to join other women on ___(date and timed)___ at___(place)____ to discuss these issues for an hour to an hour and a half. It is freely your decision to participate or not. If you decide to come, you need to know that we will be tape-recording the sessions. This will give us a better record of what has been said so we can review it and write it down in the future. At the end of the group if you wish you can listen to the tape and erase anything you have said. Only Mrs. Vary, Mrs. Chhorvy and myself will listen to them, and once we are finished with this study, we will destroy the tapes. We will write up the results of what we learn, but when we do that we will not use your name, so no one who reads our results will be able to know what you said. If at any time during the group you feel uncomfortable or don't want to continue, you are free to leave.

FOR INDIVIDUAL INTERVIEWS
We were told by _(name of contact)_ that you have recently had a baby/are a midwife and might be a good person to talk with. We are trying to learn about pregnancy and childbirth in Cambodia. We are talking to women in Prey Veng, Kampong Speu and Kampong Thom provinces and Phnom Penh about their experiences. We would like to spend an hour or two talking with you and asking questions. It is freely your decision to talk with us or not. If you decide to participate, you need to know that we will be tape-recording our conversation. This will give us a better record of what has been said so we can review it and write it down in the future. At the end of the group if you wish you can listen to the tape and erase anything you have said. Only Mrs. Wary, Mrs. Chhorvy and myself will listen to them, and once we are finished with this study, we will destroy the tapes. We will write up the results of what we learn, but when we do that we will not use your name, so no one who reads our results will be able to know what you said. If at any time during our talk you feel uncomfortable or don't want to continue, please let us know and we can stop the tape and interview.
APPENDIX E

DEMOGRAPHIC INFORMATION FORM

(collected for each participant)
Site
Name
Age
Total # pregnancies
  Term deliveries
  Preterm deliveries
  Abortions
  Living children
Complications
Years of formal education
# Household members
Ages of household members
Type of house
  Stilts
  Roof
  Walls
Material Ownership
  Radio
  Television
  Bicycle
  Motorcycle
Thank you for coming today to help us learn about what Khmer women believe and do during their pregnancies and deliveries and after. We are pleased that you can enjoy us in this discussion. Before we begin we want to remind you that whatever we discuss in this group is confidential. Many of you may share your own ideas and experiences, and we want you to feel free to talk openly about these things. So we ask all of you to please not discuss specific comments shared during this group with others. That way we can respect each other’s privacy.
APPENDIX G

INDIVIDUAL INTERVIEW GUME

N.B. * items were asked only to TBAs and midwives; the remaining questions were asked to all respondents.

NAME AGE
OB HISTORY YEARS EDUC #HH & AGES OWNS--T, M, B, R HOUSE-STILTS, WALLS, ROOF

"1. HOW DID YOU BECOME A TBA? WHO TAUGHT YOU? HOW DID YOU LEARN?

*2. HOW MANY YEARS HAVE YOU DONE DELIVERIES?

*3. HOW MANY BABIES DO YOU THINK YOU HAVE DELIVERED? DURING THE LAST 2 MONTHS HOW MANY BABIES DO YOU THINK YOU HAVE DELIVERED?

*4. DO YOU WORK WITH THE TRADITIONAL HEALER? DOES THE TRADITIONAL HEALER COME TO THE HOUSE AT THE TIME OF DELIVERY?

5. WHAT DO YOU KNOW ABOUT THIET? WHAT CAUSES PREGNANCY?

6. WHAT SHOULD WOMEN DO TO PROTECT THEIR PREGNANCIES? ACTIVITIES, FOOD (SHOULD WOMEN EAT MORE OR LESS OR THE SAME THAN NORMAL DURING PREGNANCY?) MEDICINES.

*DO YOU EXAMINE PREGNANT WOMEN BEFORE DELIVERY? *WHAT ADVICE DO YOU GIVE THEM? *DO PREGNANT WOMEN COME AND SEE YOU BEFORE DELIVERY? DO YOU EVER SEE THE TBA DURING PREGNANCY?

7. WHAT IS THE DIFFERENCE BETWEEN BLEEDING TO WASH A BABY'S FACE AND BLEEDING WHICH CAUSES A MISCARRIAGE?
WHAT CAUSES THESE KINDS OF BLEEDING? ARE THEY DANGEROUS?
IS THERE ANYTHING YOU CAN DO TO HELP A WOMAN WITH THIS KIND OF BLEEDING?

DO WOMEN COME TO YOU WITH THIS PROBLEM OR GO TO OTHERS?

8. WHAT IS THE DIFFERENCE BETWEEN SWELLING FROM THE BABY AND SWELLING FROM DISEASE?
ARE THEIR OTHER KINDS OF SWELLING?
ARE THEY DANGEROUS?
IS THERE ANYTHING YOU CAN DO TO HELP A WOMAN WITH SWELLING?
DO WOMEN COME TO YOU WITH SWELLING OR GO TO OTHERS FOR HELP?

9. WHAT KINDS OF DANGERS/PROBLEMS DO WOMEN IN CAMBODIA FACE SPIRITUALLY AND PHYSICALLY?
WHAT DO YOU KNOW ABOUT GHOSTS (KMOUC), SPIRITS (PRIEY), AND WITCHES (QAB)?
CAN THEY CAUSE PROBLEMS FOR PREGNANT WOMEN? WHEN DO THEY CAUSE PROBLEMS?
IF THEY CAUSE PROBLEMS, WHAT ARE THE PROBLEMS?
*WHAT CAN YOU DO TO HELP THE WOMAN?
WHAT KIND OF PROBLEMS DO PREGNANT WOMEN IN CAMBODIA HAVE? WHAT KIND OF DANGERS DO THEY FACE?
WHAT IS THE BIGGEST FEAR KHMER WOMEN HAVE DURING PREGNANCY, DELIVERY AND AFTER DELIVERY?
WHAT CAN YOU DO FOR THESE PROBLEMS/DANGERS?

*IF A PREGNANT WOMAN HAS A PROBLEM WHEN DOES SHE COME TO YOU AND WHEN DOES SHE SEE THE PEET OR THE KRUU KMAE?

* 10. TELL US HOW YOU DO A DELIVERY. WHEN DOES THE WOMAN CALL YOU? WHAT DO YOU DO WHEN YOU GET TO THE HOUSE TO PREPARE FOR THE DELIVERY?
HOW CAN YOU TELL ITS TIME TO FOR THE WOMAN TO PUSH?
HOW CAN YOU TELL ITS TIME FOR THE PLACENTA TO DELIVER?

11. WHAT HAPPENS IF A WOMAN DOESNT BLEED MUCH? WHAT DO YOU DO IF BLOOD IS LEFT INSIDE?

12. TELL US ABOUT ROASTING. WHY DO WOMEN ROAST?
WHAT ARE THE BENEFITS OF ROASTING?

WHAT WOULD HAPPEN IF WOMEN DIDNT ROAST?
HOW LONG SHOULD YOU ROAST? HOW LONG DID YOUR MOTHER/GRANDMOTHER ROAST?
ARE THERE SUBSTITUTES FOR ROASTING-INJECTING HOT MEDICINES, HOT ROCKS?
ARE THERE WOMEN WHO SHOULD NOT ROAST?-DIZZINESS, BLEEDING, SWELLING, SEvere HEADACHE, BLURRED VISION, AFTER SAB, AFTER PREEMIE DELIVERY WHERE BABY LIVES OR DIES, AFTER DELIVERY WHERE BABY DIES?
WHAT SHOULD A WOMAN EAT/DRINK WHILE ROASTING? HOW DO YOU END THE TIME OF ROASTING?

13. EXPLAIN THE DIFFERENCE BETWEEN SAWSAYE KJEY AND SAWSAYE CHAA. HOW LONG DOES SAWSAYE KJEY LAST?

HOW CAN YOU TELL WHEN YOU ARE SAWSAYE CHAA?

WHAT IS DIFFERENT IN YOUR BODY? WHAT VULNERABILITIES ARE THERE WHILE YOU ARE SAWSAYE KJEY?
CAN YOU GET TOAS WHILE YOU HAVE SAWSAYE CHAA?

14. WHAT CAUSES TOAS?

HOW MANY KINDS ARE THERE?

WHAT ARE THE SYMPTOMS? WHAT IS THE TREATMENT? HOW DO YOU PREVENT TOAS?
ASK SPECIFICALLY ABOUT TOAS BEYK SROKA, TOAS TUM, TOAS CAMNEY, TOAS SAWSAYE, TOAS DANAIEYK, TOAS PRUEY CET.

15. EXPLAIN THE DIFFERENCE BETWEEN PRIEY KRAWLAH PLEUNG AND PRAKAC-CAUSES, SIGNS AND SYMPTOMS, TREATMENT AND PREVENTION.

16. WHAT IS THE BIGGEST PROBLEM KHMER WOMEN FACE DURING AND AFTER PREGNANCY?

17. CLINICAL PROBLEMS

WHAT DO YOU DO IF THERE IS A LONG LABOR? IF THE BABY IS BREECH?
IF THE BABY IS T-LIE?

IF SHE STARTS BLEEDING BEFORE THE PLACENTA IS DELIVERED? IF SHE BLEEDS AFTER THE PLACENTA IS DELIVERED?
IF THE PLACENTA WON'T DELIVER? IF SHE BEGINS TO SEIZE?
IF SHE HAS A FEVER?

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* 18. *AFTER DELIVERY HOW LONG DO YOU STAY WITH THE WOMAN? WHEN DO YOU RETURN? WHAT DO YOU DO WHEN YOU RETURN?

* 19. HOW FAR DO YOU TRAVEL TO DO A DELIVERY? HOW DO YOU GET THERE?

20. WHY DO WOMEN GET INJECTIONS AND WHAT INJECTIONS DO THEY GET DURING PREGNANCY, DELIVERY, POSTPARTUM?
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| lotus flower   | Musa sap |}

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<td>ដឹង់ឈី</td>
<td>roka</td>
<td></td>
</tr>
<tr>
<td>ដឹង់ឈី</td>
<td>mistletoe or parasitic plants which grow on kapok, guava, kandov trees</td>
<td></td>
</tr>
<tr>
<td>ដឹង់ឈី</td>
<td>rukanek</td>
<td></td>
</tr>
<tr>
<td>ដឹង់ឈី</td>
<td>bark of guava tree</td>
<td></td>
</tr>
<tr>
<td>ដឹង់ឈី</td>
<td>mukak leaves</td>
<td></td>
</tr>
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### KHMER MEDICINE USED AFTER DELIVERY

<table>
<thead>
<tr>
<th>Khmer</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>ខកមូតី</td>
<td>ktom bark</td>
</tr>
<tr>
<td>បោរស្រស់</td>
<td>pepper and alcohol</td>
</tr>
<tr>
<td>សុត្រូបុរាណ</td>
<td>soot</td>
</tr>
<tr>
<td>កុឡេជីក្រុង</td>
<td>guava leaves</td>
</tr>
<tr>
<td>ប្រឹក្សានេះ</td>
<td>black sesame</td>
</tr>
<tr>
<td>ឈឺជ្រូនូះ</td>
<td>chi sanghom</td>
</tr>
<tr>
<td>ស្វីរ</td>
<td>naam</td>
</tr>
<tr>
<td>ធំ</td>
<td>kakhop</td>
</tr>
<tr>
<td>ដំឫស្លបុល</td>
<td>treef tree</td>
</tr>
<tr>
<td>ចាប់កុំ</td>
<td>dah kue</td>
</tr>
<tr>
<td>ការាយូង</td>
<td>voal thrung</td>
</tr>
<tr>
<td>ពុំដងបុក</td>
<td>poo dambrook</td>
</tr>
<tr>
<td>ក្រហមឈឺណា</td>
<td>kravaany cruck</td>
</tr>
<tr>
<td>សុត្រូបុរាណ</td>
<td>honey</td>
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<tr>
<td>ឆ្កាប្រនឹង</td>
<td>chok saang</td>
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<td>ម៉ូកឆ្មូន</td>
<td>moek chnieng</td>
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<tr>
<td>កែតូរ</td>
<td>kantor root</td>
</tr>
<tr>
<td>សំរុាសួត</td>
<td>bay klang</td>
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<td>ដំឫស្លម៉ា</td>
<td>dey angraee</td>
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<td>thal ken</td>
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<td>ការាយូង</td>
<td>kandap cangey</td>
</tr>
<tr>
<td>ផ្កាំឈ្នះ</td>
<td>chaupleung</td>
</tr>
<tr>
<td>ដំឫស្លម៉ា</td>
<td>khul bark</td>
</tr>
<tr>
<td>កុំបូផ្គិត</td>
<td>khopprrey tree</td>
</tr>
<tr>
<td>ចេញំន៊ឺម្ត្រមា</td>
<td>treat sva tree bark</td>
</tr>
<tr>
<td>Khmer</td>
<td>English</td>
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</tr>
<tr>
<td>ល្សាលាបាលារិច</td>
<td>bark of koomuy tree</td>
</tr>
<tr>
<td>ស្វៀងមឱ្យ</td>
<td>sandal tree</td>
</tr>
<tr>
<td>ប្រស់កាហ្វេក្រូស្តី</td>
<td>bark of kakhreprey tree</td>
</tr>
<tr>
<td>ស្វៀងមឱ្យ</td>
<td>sandal wood</td>
</tr>
<tr>
<td>មីពូសារុប</td>
<td>mengpoodambook</td>
</tr>
<tr>
<td>សែលស្រែស្រែ</td>
<td>leaf of bamboo which doesn't grow in forest</td>
</tr>
<tr>
<td>សែលស្រែស្រែ</td>
<td>leaf of forest bamboo</td>
</tr>
<tr>
<td>ខែទុរស្រាអ</td>
<td>white kray root</td>
</tr>
<tr>
<td>ខែទុរស្រាអ</td>
<td>red kray root</td>
</tr>
<tr>
<td>ឈស្សុងស្រាអ</td>
<td>tasaeng bark or leaves</td>
</tr>
<tr>
<td>រុងស្រាអ</td>
<td>nyany tree</td>
</tr>
<tr>
<td>ចុះព្យាយាម</td>
<td>chur pleung root</td>
</tr>
<tr>
<td>សែលរូបបែក</td>
<td>leaf or bark of custard apple tree</td>
</tr>
<tr>
<td>រឹងស្រាអ</td>
<td>mdeng meas</td>
</tr>
<tr>
<td>កាល់</td>
<td>kambash</td>
</tr>
<tr>
<td>សាលារីង</td>
<td>shield of a sword</td>
</tr>
<tr>
<td>វាម៉ូរ</td>
<td>rattan roots</td>
</tr>
<tr>
<td>ប៉េនឿ</td>
<td>beynun</td>
</tr>
<tr>
<td>ប៉េនឿយុង</td>
<td>beynany</td>
</tr>
<tr>
<td>ក្រែវោហារ</td>
<td>konruitproung</td>
</tr>
<tr>
<td>ស្នោរតុក</td>
<td>sandeyk tuk</td>
</tr>
<tr>
<td>ដោយអាចបាន</td>
<td>root or tuber of grass [generic]</td>
</tr>
<tr>
<td>រែកហោង</td>
<td>musk deer grass</td>
</tr>
<tr>
<td>ម្យាការីម</td>
<td>trgan bark</td>
</tr>
<tr>
<td>ស្នោរតុក</td>
<td>kanyturdec leaves</td>
</tr>
<tr>
<td>ស្ទុកហោង</td>
<td>angquy vine</td>
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APPENDIX J

CAUSES, SIGNS/SYMPTOMS & TREATMENT OF RELAPSE

1. TOAS MEHOU/TTOAS CAMNEY/ ការមិនប្រឈម/RELAPSE FROM

CAUSE:

EAT OR DRINK:
- FOODS YOU HAVEN'T EATEN WHILE ROASTING 111, 38, 39, 45
- FOOD FORBIDDEN BY THE OLD WOMEN 17
- UNCOOKED VEGETABLES FG21
- VEGETABLES 210
- SOUR THINGS 26
- COLD WATER FG21
- UNBOILED WATER 24
- LEFTOVER RICE FG23
- POTATO (OOMLONG VOAL ប្រែនាង) 25
- SWEET POTATOES
- TOMATOES 36
- VARIETY OF CABBAGE (SPEY KMAOV ឱក្ខាូ់) 16
- WHITE PTEE 210
- RONGEANG (ឈុះទឹក) LEAVES 34
- SAQOM [GREEN HERB] សេី 49
- PINEAPPLE 15, 23, 36, 49, FG31
- JACKFRUIT 22, 29, 47 (RIPE) 23, 26, FG13
- JACKFRUIT SEMLAW FG12, 31
- RIPE BANANAS 47, FG23
- PONG MOEN (ក្រាហ្វៅ) BANANA 22
- SNAPMook (ស្រប់សេ) BANANA 22
- AMBONG (ស្រី) BANANA 22, 23, 35, FG32, 33
- NUON (ឈុះ) BANANA 28
- HONEYCOMB 37
- FIELD CUCUMBER 11, 25, 33, 48, 49
- TRAKUEN (WATER SPINACH) 48
- CHINESE GOURD (រ៉ាង) 41, 47
- ANOTHER KIND OF GOURD (ស្រែ) 47
- PUMPKIN 41
- SEMLAW CURRY 25
- CHICKEN 47, FG14, WHICH RUN AROUND IN FOREST 44
- FOREST DUCK 12, 21
- DUCK FG14
- DUCK’S EGGS FG14
- BEEF 210
- BEEF FROM A BLACK COW 22
BUFFALO 22, 29, 34, 41, 44, 47, 49, FG14
PIG'S HEAD 15, 18, 21, 22, 23, 210, 31, 33, 34, 36, 310, 410 FG11, 13, 14, 22, 42
PORK FAT FG14
SEA>FISH FG11
RABBIT 41, 46, 49, FG21
MUSK DEER 44, 49
TURTLE 41, FG21
FATTY MEAT FG21
PROHOUK FG22
KREYE (ḵwē) FISH 11, 22, 25, 34, FG13
PROMA (pǔñ) FISH 34
PRA (ŋ) FISH 34
KMAN (ŋ) FISH 22
DIEP (wą) FISH 18, 22, 29, FG1 I
CDO (d) FISH 15, 18, 27, 46, 410, FG11, 41
CLAT (gint) FISH 46, 410
KRAMAM (ŋ) FISH 21
RED-TAILED FISH 21, 23, 27, 28, 310, 41, FG13, 41, 42
PROLOUNG (pùñ) FISH 16, 37
KCEUNG (g) FISH 27, 28
POO (p) FISH 35
CRAB 15
TAPIOCA 16

SMELL:
A RABBIT ROASTING 26, 41
PLASTIC BAG BURNING 26

SIGNS AND SYMPTOMS:
FEVER 11, 21, 22, 24, 27, 29, 35, 38, 49, FG12, 23, 41
HEADACHE 11, 21, 23, 24, 210, 33, FG13, 14, 21, 22, 23, 41
STIFF BACKBONE 11
CRAMPING IN THE BACKBONE 31
GOODSE BUMPS ON THE BACKBONE 41
NAUSEA 47
VOMITING 11, 16, 21, 24, 34, 36, 44, 47, FG13
DIARRHEA 11, 13, 15, 16, 17, 18, 19, 110, 111, 21, 22, 24, 25, 26, 33, 34, 35, 36, 38, 39, 310, 42, 43,
44, 45, 47, 48, 410, FG12, 13, 14, 21, 32, 41, 42
DYSENTERY 21, 28, 30
ABDOMINAL PAIN 13, 25, 36, 42, 410
ABDOMINAL SWELLING 110, 33, 34, 310, 43, 45, FG21, 32, 44
ABDOMINAL CRAMPING 111, 46 FG14, 22
CRAMPING 15, 16, 22, 26, 210, FG13
CRAMPING IN THE CHEST 16
SHAKING IN THE ARMS AND LEGS FG13
CRAMPING IN ARMS AND LEGS 17
TIGHTNESS IN THE JAW 13, 27, 31, 33, 34, 37, FG12, 13, 14, 31, 32
INSUFFICIENT BREASTMILK 14, 16, 210, FG12
CHILLS 21, 22, 24, 37, 49, FG23, 32
NO ENERGY 23, FG41
WEAKNESS 27
POOR APPETITE 23, 45
BLURRED VISION 24
DIZZINESS 24, FG21
GOOSEBUMPS ON BACKBONE 38
ITCHING IN THE UTERUS (SEAFOOD) FG11
GET SKINNIER AND SKINNIER 45 FG14
SHIVERING FG23
HOARSENESS FG31
RINGING IN THE EARS FG31
DRY SKIN 45

TREATMENT:
SHOOT OF KTUM (♀) TREE MIXED WITH ALCOHOL FG42
TKOV (♀) TREE BOILED WITH WATER FG22
SHOOT OF CUSTARD APPLE WITH WHITE WINE 11
SHOOT OF CUSTARD APPLE POUNDED WITH 7 PEPPERCORNS, 7 CLOVES GARLIC AND MIXED WITH ALCOHOL 111
ROOT OF CUSTARD APPLE WITH ALCOHOL 34
BARK OF CUSTARD APPLE MIXED WITH ALCOHOL 310, 46
BARK OF CUSTARD APPLE TREE, PEPPER, GARLIC MIXED WITH WINE 43, 44
BARK OF CUSTARD APPLE TREE AND TONTOUT PRONG BOILED WITH WATER FG21
CUSTARD APPLE LEAVES AND ALCOHOL 19
ROOT OF KRAY (♂) WITH ALCOHOL 34
TAKE FOOD YOU GOT RELAPSE FROM, BURN OR DRY IT AND BOIL WITH WATER/ALCOHOL TO DRINK 13, 15, 17, 18, 111, 22, 41, 42, 44, 410, FG31, 32
BOIL WATER IN POT USED TO PREPARE FOOD WHICH CAUSED YOUR RELAPSE AND DRINK IT 31
FOR RELAPSE FROM RICE, TAKE SLIVER OF WOODEN PESTLE [USED TO HUSK RICE]. BURN IT AND BOIL WITH WATER TO DRINK 31
TAKE KCEUNG (♀) FISH AND ROAST UNTIL IT IS BLACK MIX WITH 3 SPOONS OF WATER 28
TAKE AMBONG (♀) BANANA TO BURN AND BOIL TO DRINK 35
TAKE FOOD YOU GOT RELAPSE FROM, BURN IT AND MIX WITH ALCOHOL TO DRINK 16
TAKE 7 CLUMPS OF CEANG KRAH (♀) GRASS AND ASHES FROM THE MIDDLE OF THE STOVE, BOIL WITH 3 CUPS OF WATER UNTIL THERE IS 1 CUP OF WATER LEFT TO DRINK 36
TAKE [PROBABLY BARK OF] COW TONGUE'S TREE AND BOIL WITH WATER 310
ASHES FROM THE MIDDLE OF THE STOVE MIXED WITH CEANG KRAH (♀) GRASS 21
ASHES FROM THE MIDDLE OF THE STOVE WITH SOOT, PEPPER, GARLIC AND URINE 15
ASHES FROM THE MIDDLE OF THE STOVE WITH BOILED WATER AND DRINK 25
KHMER MEDICINE 24, 27, 29, 210, 38, 39
BANDOWL PIC (♀) [TYPE OF VINE], KAFFIR LIME LEAVES AND PUNLAY (♀) 26
2. **TOAS TWEKA/TOAS SAWSAYE/สัมพันธ์วิกฤติ/RELAPSE FROM WORK**

**CAUSE:**
RESUMING HARD WORK TOO SOON 13, 14, 15, 17, 19, 111, 22, 23, 25, 27, 29, 210, 31, 32, 33, 34, 35, 36, 38, 39, 310, 42, 43, 45, 46, 47, 48, 410
CUT FIREWOOD 11, 47
CARRY WATER CARTS 16
CARRYING WATER OVER THE SHOULDER 47, FG13
TRANSPLANTING RICE FG13
WASHING CLOTHES 41
RIDING IN A CAR 41
USING A COMB (SNET USED TO REMOVE LICE) WHICH CAN SCRATCH THE SCALP FG42
LIFTING HEAVY THINGS 43, 48, 49
FALLING DOWN 19

**SIGNS AND SYMPTOMS:**
FEVER 11, 13, 14, 16, 111, 25, 27, 29, 34, 36, 310, 48
PAIN IN THE BODY 11, 26 ALL OVER BODY 210
ABDOMINAL PAIN 49
CHEST PAIN 19
HEADACHE 11, 12, 16, 110, 21, 28, 35, 42, 47, 410, FG21
CHILLS 14, 16, 111, 27, 34, 310, 42 FG21
AXILLARY SAWSAYE IS HARD AND RED 16
PAIN IN ALL THE SAWSAYE 29, FG13
PAIN IN ARM AND LEG JOINTS 34, 36, 41, 45
DIARRHEA 49, FG21
DYSENTERY 21
DEHYDRATION FG22
DIZZINESS 41
TIRED 23, 36
NO ENERGY 23, 32, 46
WEAK 41, 47
CANNOT EAT RICE 32
POOR APPETITE 46, 48
COUGH 24, 35
GOOSEBUMPS 111, 25, 42
GOOSEBUMPS ON BACKBONE 111, 41
TWITCHING IN ARMS AND LEGS 25
WEAKNESS IN ARMS AND LEGS 25, 41
CRAMPING IN ARMS AND LEGS 17, 19, 110
WEAKNESS IN ARM AND LEG JOINTS 45
INSUFFICIENT BREASTMILK 111, 26, 38, FG14
GET THINNER AND THINNER 19, 31, 38, 39, FG22
CRAMPING IN THE BACKBONE 33
SHIVERING ON THE BACKBONE FG14
PULSATIONS 35, 410
PROBLEMS BREATHING 41
BLURRED VISION 47, FG41
SHAKING IN THE BODY 47

TREATMENT:
WASH HANDS AND LEGS AND THEN TAKE THE WATER YOU WASHED IN, BOIL AND DRINK IT 13
TAKE WATER YOU WASHED CLOTHES WITH, BOIL AND DRINK 41
TAKE A BIT OF THE CAR TIRE, BURN IT AND BOIL WITH WATER TO DRINK 41
BARK OF CUSTARD APPLE TREE 15
BARK OF CUSTARD APPLE WITH GARLIC, PEPPER AND ALCOHOL 410
TKOV (♀) BARK 15
KTUM (♂) BARK 15
SOOT & PEPPER MIXED TOGETHER WITH WINE 15
STOMACH OF PORCUPINE MIXED WITH ALCOHOL 16, 110
ONLY THE KRUU KMAE CAN HELP BY GIVING KHMER MEDICINE TO DRINK 21
MASSAGE AND DRINK KHMER MEDICINE 22
DRINK KHMER MEDICINE 19, 23, 24, 26, 27, 28, 29, 210, 31, 34, 35, 36, 38, 310, 45, 48, 49
1/2 LITER OF ALCOHOL MIXED WITH CHII SANG HUM (ះំឆ្នាំង) AND SOOT 25
BOIL PRUKPLAE (ព្រឺខ្មែរ) WITH WATER AND DRINK 32
PROKPLAE WITH WHITE WINE 33
PEPPER, GARLIC AND A KIND OF TOMATO (PINGPOAH SRAOM បារីភោជន) MIXED WITH WINE 39
DON'T BREATHE WHILE PICKING 7 SHOOTS OF CUSTARD APPLE LEAVES 42
CAN DIE FROM THIS FG22
Krey saw, krey krahaam, pley sakoar (១២៩) that grows on the top of the hill with 7 garlic cloves, 7 peppercorns pounded together with wine, lpeak (៣៨) and pdow (៤៧)

Take whatever caused person to get toas and burn it and mix it with alcohol to drink

Can use toas mehoup treatment listed above 47

3. Toas Damneyk/ឃាតាសុខងារ: RELAPSE FROM COITUS

Signs and symptoms:
Dry skin 15, 22, 23, 25, 26, 29, 31, 35, 36
Thin skin 29
Fever 29
Chill 29
Skinny 16, 110, 21, 22, 23, 24, 25, 26, 27, 31, 33, 34, 35, 36, 41, 44, 46
Dehydrated 44
No energy 16, 37, 410
Weak 18
Cough 25
Hot in body 28, 38
Insufficient breastmilk 28
Stiff backbone 34
Sunken eyes 34
Palpitations 34
Numbness 38
Burning on arms and legs 42
Jaw tightness 111, 47
Food doesn't taste good 410
Don't sleep well 18
Don't eat well 18
Abdominal cramping 19

Treatment:
Take pubic hair of man, burn it and mix together with wine, drink 15, 24
Take pubic hair of man and woman, burn and mix with alcohol to drink

Take pubic hair of man and woman and cut piece of mat which they've slept together on, burn and mix with alcohol to drink 111

Mix semen with white wine, drink 15

Wash husband's penis and drink water used for washing 22, 23, 34, 35

Khmer medicine 28, 35, 38, 46, 410

Drink semen 18

After you deliver your next child you drink Khmer medicine and the toas stops 110
This can turn into Toastum if it lasts for a long time. Chief SX Thinness
Treatment the same pubic hair from man & woman burned and mixed with
alcohol.

Chief symptom of Toastum—get thinner and thinner.
Toastum is Toast of Unknown etiology.
Same as Toast saw save.
Get skinny and have dry skin.

4. Toast Pruey Cet/ผู้หญิงศันษี/Relapse from sadness or worry

Cause:
Thinking a lot.
Husband takes another wife.
Husband didn’t help take care of wife when she was sick.
Thinking a lot about no money.
Can’t earn money.

Signs and symptoms:
Acts crazy.
Vomiting with blood.
Get skinnier and skinnier.
Thin skin.
Dry skin.
No energy.
Tired.
Weak.
Fever.
Cough.
Headache.
Dehydrated.
Colds.
Goosebumps.
Unhappy.
Cannot sleep well.
Cannot eat well.
Frustrated.
Very angry.
Palpitations.
Poor appetite.

Treatment:
Often cannot treat.
No treatment exists.
And is fatal.

Can treat and make better but not cure.

Have someone make you happy.

Take bark of custard apple tree or shavened custard apple and 7
peppercorns, mix with alcohol to drink.

Khmer medicine.
5. TOAS TIK PLEANG OR TOAS TIK SONSAM/េតាដើមដួស/RELAX FROM RAIN OR DEW

CAUSE:
WALKING IN RAIN OR DEW 22, 43, 44, 45, 410

SIGNS AND SYMPTOMS:
CHILLS 15, 21, 22, 23, 27, 31, 33, 35, 37, 39, 310, 41, 47, 48
COLD 111, 22, 27, 28, 38, 310, 47
COLD FROM SOLES OF FEET TO HEAD 24
COLD IN SOLES OF YOUR HANDS AND FEET 26
COLD ON ARMS AND LEGS 47
BURNING ON LEGS 26
FEEL HOT 37
FEEL HOT IN CHEST 24
Fever 111, 21, 23, 29, 31, 48, 413
HEADACHE 21, 23, 24, 28, 210, 32, 49
DIARRHEA 21
DYSENTRY 21
CRAMPING 21, 39
NUMBNESS 38, ON ARMS OR LEGS 111, 22, 32, 35, 37, 310, 43, 44, 45, 46
CRAMPING ON ARMS AND LEGS 310, 410
GOOSEBUMPS 25, 38, 111
GOOSEBUMPS ON BACKBONE 111
ABDOMINAL PAIN 25, 41, 410
PAINFUL 31, 37
THINNESS 41
SWELLING ALL OVER BODY 111

TREATMENT:
FOR RAIN
HEAT A BOWL UNTIL VERY HOT, CATCH RAINWATER IN IT, DRINK 15
KRUU KMAE HELPS BY GIVING KHMER MEDICINE TO DRINK 21
POUR RAINWATER ON THE ROOF, CATCH IT AND BOIL AND DRINK IT 22
KHMER MEDICINE 23, 29, 210, 33, 35, 43, 46, 49
11 TIGERS [PREPACKAGED KHMER MEDICINE] MIXED WITH WINE 410
POUR RAINWATER OVER YOUR BODY 24
HEAT PLOWSHARE AND POUR BOILED WATER OVER IT, DRINK THIS WATER 25
ROASTING 26
BOIL RAINWATER AND DRINK 18, 31, 37, 41, 44
MIX PLOUK BAAT (ៅចារ) AND KNUM (ៀទ) ROOT WITH URINE OR HOT WATER 37
HEAT A ROCK UNTIL WARM AND PUT ARMS AND LEGS ON IT 310
HEAT A POT UNTIL HOT, PUT PEPPER, GARLIC AND RAINWATER IN AND DRINK 47

FOR DEW:
APPLY KHMER MEDICINE EVERY MORNING 22
KHMER MEDICINE 29, 39, 310
SAWSAYE MEDICINE 48
STEAM WITH KAFFIR LIME LEAVES, SALT, LEMON GRASS, POLYUM (ដឹង), POMSEYN (ឈ្មោះ) 111
COLLECT DEW IN PLATE, BOIL IT AND DRINK 47

5. TOAS TOM/សុខសំរុង/PROLONGED RELAPSE

CAUSE:
HAVE HAD TOAS AFTER PREVIOUS DELIVERIES—PASSED FROM CHILD TO CHILD 31
DO HARD WORK 33, 39
HAVE HAD TOAS DAMNEYK FOR A LONG TIME 36, 44

SIGNS AND SYMPTOMS:
SKINNY 31, 34, 36
DEHYDRATED 31, 44
THINNER AND THINNER 33, 9

TREATMENT:
DRINK KHMER MEDICINE AND MASSAGE FOR 3 CONSECUTIVE MORNINGS 34
CAN DIE 3, 37
DIFFICULT TO TREAT 39

6. TOAS BAUK SRORKA/សុខធទ្ធិសុក្រា/DRY SKIN RELAPSE

CAUSE:
EATING PIG’S HEAD 31
SLEEPING TOGETHER 31
SAME AS TOAS TWEENKA 32
FROM HAVING TOAS TWEENKA FOR A LONG TIME 34

SIGNS AND SYMPTOMS:
DRY SKIN 31, 32
SKINNY 310

TREATMENT:
CAN DIE 310
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<thead>
<tr>
<th>Khmer</th>
<th>English</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ដំាវ៉ា</td>
<td>the stomach of porcupine</td>
<td>Dracaena sp.</td>
</tr>
<tr>
<td>បុំញ៉ា</td>
<td>tbal ken</td>
<td>Abutilon indic a</td>
</tr>
<tr>
<td>សឺលឺេប៉េ</td>
<td>sunluck bey</td>
<td>Aryterea litoralis</td>
</tr>
<tr>
<td>តូរឃុរ</td>
<td>tkov tree</td>
<td>Anthrocephalus cinensis</td>
</tr>
<tr>
<td>កុំសុូរាចេម</td>
<td>custard apple leaves</td>
<td>Anona squamosa</td>
</tr>
<tr>
<td>ប៉េការ៉ា</td>
<td>papaya shoots</td>
<td>Carica papaya</td>
</tr>
<tr>
<td>កម្ម៦</td>
<td>ktum shoots</td>
<td>Adinia sessiflora</td>
</tr>
<tr>
<td>សុខូរឃុរឃុរ</td>
<td>cueng krah grass</td>
<td></td>
</tr>
<tr>
<td>អ្នផលេស្</td>
<td>shriveled custard apple fruit</td>
<td></td>
</tr>
<tr>
<td>សរៈប៊ូរាចេម</td>
<td>bark andatekoo tree</td>
<td>Achyranthes aspera (?)</td>
</tr>
<tr>
<td>សោម្មុំ</td>
<td>kray root</td>
<td></td>
</tr>
<tr>
<td>សុូរាំ</td>
<td>custard apple roots</td>
<td></td>
</tr>
<tr>
<td>សោម្មុំ</td>
<td>bark of custard apple tree</td>
<td></td>
</tr>
<tr>
<td>បិំឈុន</td>
<td>prok plae plant</td>
<td>Phyllanthus urinaria</td>
</tr>
</tbody>
</table>
APPENDIX L
CAUSES, PREVENTION, SIGNS/SY?~TOMS & TREATMENT OF PRIEY KRAWLAH PLEUNG

Etiology:
- Pieces of placenta left inside
- Membranes left inside
- Blood left inside
- Obstruction from blood clot left in uterus
- Blood goes up
- Swelling
- Long labor
- Lots of bleeding
- High blood pressure
- High blood pressure exacerbated by drinking salty water and roasting on a very hot fire
- Roasting on a hot fire and drinking a lot of alcohol
- Salty urine
- Ineffective prevention measures
- Not using prevention measures
- Toxemia gravidarium
- Ghosts or spirits come to scare the woman
- Ghosts or spirits eat the blood of the woman
- Ghosts attracted to blood of women and come into her body
- Spirit of woman's parents enter her body
- Frightened by something in their sleep
- Not obeying advice of ghosts
- Getting up from roasting bed and walking around [inactivates incantations]
- Spells
- Thinking a lot [worrying]
- People saying bad things

Prevention:
- Kruu kmae or tba recites incantations around roasting bed after delivery
- Recite incantations around stilts of the house after delivery
- Having regular antenatal examinations of blood pressure and urine
- Drink team kmae
- Eat bland food
- Apply lime crosses to ankle of woman [confuses the ghosts]
- Make lime cross on mother's neck
Draw crosses in the four corners of the house
Put thorns beneath the roasting bed
Wear strings around their waist
Tie thread around their wrist
Pour lustral water
Make offerings to spirits of the grandparents

Keep visitors away from roasting woman

Don't let roasting woman be along

Do not say words like "very hot," "very cold," or "fever" in presence of the roasting woman
If previous history of priey krawlah pleung, roast over lower fire
Do not think a lot
Do not have people call from beneath the house [inactivates incantations]

Signs & Seizures symptoms: Swelling
Loss of consciousness
Fainting
Blurred vision
High fever
Chills
Speak nonsense Facial grimace
Stick out tongue Roll eyes up and down
Sees things
Fear
Crying
Act like a crazy person [pull edge of sleeping mat or eat it, walks back and forth, walks around nude, bites people]
Ringing in the ears
Deafness
Weakness (hung lveuy) Palpitations
Slobbering
Manic
Obstructed breathing
Fullness in the chest
Loss of control of extremities [become floppy] Weight loss
**Treatment:**

- Take fire from beneath the bed
- Lower the fire
- Khmer medicine
- Kruu kmae blows and spits
- Avoid salty foods
- Diuretics
- Manually remove the blood (louk ba yook chiem)
- Massage to remove the blood
- Aluminum sulfate (sac chu kiew)
- Tha chews black pepper which she spits into woman's eyes
- Kruu larvae puts threads on her wrists
- Burn incense to spirit of woman's parents and offer them things
- Kruu peet gives an injection
- Kruu kmae blows, spits and recites incantations
- Kruu larvae pours lustful water over woman
- Have woman drink a mixture of burned chicken feces and wine
- Garlic
- Pepper
- Pray and make offerings to the spirits, burn incense
- Lock woman in a room
- Kruu peet gives an IV
## APPENDIX M

### ANALYSIS OF CAUSES OF MATERNAL DEATHS DESCRIBED IN IDI AND FG

<table>
<thead>
<tr>
<th>#</th>
<th>BIOMEDICAL CAUSE OR SX</th>
<th>FOLK CAUSE OR SX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>UNKNOWN</td>
<td>difficult delivery</td>
</tr>
<tr>
<td>2</td>
<td>UNKNOWN</td>
<td>PKP while roasting</td>
</tr>
<tr>
<td>3</td>
<td>sz during del</td>
<td>baby couldn't deliver</td>
</tr>
<tr>
<td>4</td>
<td>obstructed labor</td>
<td>baby couldn't deliver</td>
</tr>
<tr>
<td>5</td>
<td>polyhydramnious, jaundice</td>
<td>all over body swelling a. term. sweet urine; 2-3 buckets of water. came out with a strong smell. jaundiced immed. died</td>
</tr>
<tr>
<td>6</td>
<td>retained placenta</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>obstructed labor. IP hemorrhage</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>PPH</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>retained placenta/PPH</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>retained placenta</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>obstructed labor</td>
<td>hip bones of mother small; baby couldn't deliver</td>
</tr>
<tr>
<td>12</td>
<td>severe anemia</td>
<td>swelling since 6 mos. difficulty breathing: died pp</td>
</tr>
<tr>
<td>13</td>
<td>UNKNOWN</td>
<td>swelling since 6 mos.</td>
</tr>
<tr>
<td>14</td>
<td>UNKNOWN</td>
<td>coughing: airway blocked died 2 days pp</td>
</tr>
<tr>
<td>15</td>
<td>retained placenta</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>APH</td>
<td>bleeding at 7-8 months</td>
</tr>
<tr>
<td>17</td>
<td>retained placenta/pph</td>
<td>piece of placenta left inside</td>
</tr>
<tr>
<td>18</td>
<td>UNKNOWN</td>
<td>PKP</td>
</tr>
<tr>
<td>19</td>
<td>prolonged-obstructed labor</td>
<td>baby couldn't deliver after very long labor-4-5 d. total body swelling a 7-8 mos: salty urine acted crazy -made faces pp:</td>
</tr>
<tr>
<td>20</td>
<td>PIH</td>
<td>PKP kruu kmae told her 'Someone hates you. They've made a spell. And that's why you are sick.'</td>
</tr>
<tr>
<td>21</td>
<td>retained placenta/PPH</td>
<td>blood came out. and her body got dried out.</td>
</tr>
<tr>
<td>22</td>
<td>UNKNOWN</td>
<td>slobbering in mouth: tightness in chest 2 wks pp.</td>
</tr>
<tr>
<td>23</td>
<td>obstructed labor</td>
<td>long labor: big baby which couldn't deliver</td>
</tr>
<tr>
<td>24</td>
<td>prolonged/obstructed labor</td>
<td>long labor for 2 days; far from hospital</td>
</tr>
<tr>
<td>25</td>
<td>UNKNOWN</td>
<td>PKP; drank aluminum sulfate</td>
</tr>
<tr>
<td>26</td>
<td>obstructed labor</td>
<td>baby couldn't deliver 1</td>
</tr>
<tr>
<td>27</td>
<td>APH after trauma</td>
<td>fell while carrying water a. 8 mos-bleeding</td>
</tr>
<tr>
<td>28</td>
<td>APH after trauma</td>
<td>fell--bleeding</td>
</tr>
<tr>
<td>29</td>
<td>retained placenta infection</td>
<td>pieces of placenta inside: bad smell. PKP</td>
</tr>
<tr>
<td>30</td>
<td>PIH</td>
<td>blurred vision. sz blind paralyzed in arms and lags: PKP</td>
</tr>
<tr>
<td>31</td>
<td>PIH</td>
<td>total body swelling since 7 mos. sz X 4 hrs when FT</td>
</tr>
<tr>
<td>32</td>
<td>severe anemia</td>
<td>TBA didn't take all the blood out: had fast, shallow breathing. palpitations. and constant K4: died 1 mo pp</td>
</tr>
<tr>
<td>33</td>
<td>obstructed labor/ruprured</td>
<td>babe delivered to nose: couldn't deliver rest of way: mother had lots of uterus/ hemorrhage bleeding, cramping &amp; heartburn</td>
</tr>
<tr>
<td>34</td>
<td>obstructed labor</td>
<td>labored for a day and night. didn't deliver. bled</td>
</tr>
<tr>
<td>35</td>
<td>severe anemia</td>
<td>total body swelling since 7 mos. shortness of breath palpitations. fullness in chest which were upwards: died 1 mo pp -</td>
</tr>
</tbody>
</table>
PPH lots of bleeding after delivery. placenta or membranes still inside
APH after trauma fell from mango tree @ .4 mos.-bleeding
retained placenta placenta inside. blood rose up, cramping. obstruction
PPH/retained placenta lot of bleeding after delivery TBA couldn't del. placenta"
trauma .'APH trauma to abdomen: baby died also @ 8 mos.
inside: mother died
retained placenta piece of placenta inside
severe anemia swelling thoughout pg. anemic, no energy with all pgs. all children died
after birth: she died after #7
prolonged labor. PPH/tainod labor X 3 days & nights, lots of bleeding. placenta didn't deliver
Placenta
PPH/retained placenta piece of placenta inside, bleeding a tot
PPH lots of bleeding. lost consciousness, died G9, breech delivery
retained placenta/PPH membranes left inside; lots of bleeding. died 3 d pp
ghost came into her body after warning the husband not to drink or Wife
MKWORN would die--advice he didn't follow. seized; stuck out her tongue, eyes
rolled :died - 6 wks pp
UNKNOWN ate dried fish and then had bleeding from mouth, vagina and rectum 1 Mo.
complications of TAB drank papaya sap with alma, died after receiving injections at hospital.
UNKNOWN seized. gritted their teeth, slobbered
UNKNOWN pp got skinnier arid skinnier
retained placenta placenta stayed inside until mother died
UNKNOWN toes from dew
severe anemia total body swelling, shortness of breath
obstructed labor penis narrow: baby couldn't deliver. repeated seizures. PKP
complications of TAB injected medicine to open uterus. currettage; lots of bleeding
obstructed labor baby didn't deliver
obstructed labor in labor 7 days. baby didn't deliver; fever
complications of TAB @ . 7 mos. injected medicine and massaged
UNKNOWN teas from sleeping together (damneyk)
UNKNOWN PKP; ghosts and 'its carne and covered her. made her faint and die
UNKNOWN toas from sleeping together, skirt,, do skin. cough.
complications of TAB @ . 5 mos. bleeding
UNKNOWN total body swelling sea term
PPH bleeding during rust night of roasting
PUFD. infection @ 6 mos., cramping, 1/2 mo. later, labor, baby had a bad smell and
line skirt. blood dot inside moved Up-"
swelling on legs @a 7 mos; ttn-em total body swelling @ term. felt hot,
infection had g
bad smcU. died 2 d
UNKNOWN toas from eating a forest duct got skinnier and skinnier
UNKNOWN blood didn't come &A: had fever, PKP went in caused woman to seize
seizure & trauma seizure @ term, fell from house and died
retained placenta TBA couldn't deliver the placenta
obstructed labs baby didn't deliver, mom wem to hospital. baby delivered & she died
# APPENDIX N

## EXPRESSIONS USED FOR PAIN DURING LABOR

<table>
<thead>
<tr>
<th>Khmer Expression</th>
<th>Khmer Meaning</th>
<th>English Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>chuu siet sork</td>
<td>ປົ້າ ຕົ່ວ ແສ່ກໍາກັບ</td>
<td>chuu puah ropeang</td>
</tr>
<tr>
<td>chuu nyyav nyyav</td>
<td>ປົ້າ ຕົ່ວຊໍຍ ຕົ່ວຊໍຍ</td>
<td>chuu khang</td>
</tr>
<tr>
<td>chuu nyyev nyyev</td>
<td>ປົ້າ ຕົ່ວຊໍຍ ຕົ່ວຊໍຍ</td>
<td>chuu peeve peev</td>
</tr>
<tr>
<td>chuu leng leng</td>
<td>ເຖຼບຖິ່ງ</td>
<td>chuu chaav chaav</td>
</tr>
<tr>
<td>chuu caol</td>
<td>ປົ້າ ເຫガー</td>
<td>chuu tik tik</td>
</tr>
<tr>
<td>chuu meen teen</td>
<td>ປົ້າ ປອນຫລາຍ</td>
<td>chuu sral sral</td>
</tr>
<tr>
<td>chuu cheev cheev</td>
<td>ປົ້າ ແຈງ ແຈঙ</td>
<td>chuu oul oul</td>
</tr>
<tr>
<td>chuu camkaong</td>
<td>ປົ້າ ກາມແກ້ວ</td>
<td>chuu lmoem lmoem</td>
</tr>
<tr>
<td>chuu meuy cheev</td>
<td>ປົ້າ ແມ່ຍ ແຈງ</td>
<td>chuu ngorn</td>
</tr>
<tr>
<td>chuu meuuy knyaak</td>
<td>ປົ້າ ແມ່ຍກອນຍາກ</td>
<td>chuu trung</td>
</tr>
<tr>
<td>chuu knyooe knyaak</td>
<td>ປົ້າ ກອນຍາກທ້ອງ</td>
<td>ປົ້າ ກອນຍາກທ້ອງ</td>
</tr>
</tbody>
</table>
APPENDIX O

WORDS USED FOR MASSAGE:

DOMRONG PUAH  เดินที่  เรียก: move the baby to be straight in pelvis, what TBA does for chau siet
DOMRAE DOMRONG  เดินที่: domrae=domrong—making baby straight in pelvis by moving
KAY DOMRONG  เดินที่: domrong pud=domrae domrong
KOS PUAH  เดินที่: domrong pud=domrae domrong=kay domrong
BANGVIEN  เดินที่: domrong pud=domrae domrong=kay domrong=kos puah
KAY PUAH  เดินที่: palpate fetal position
KAN PUAH  เดินที่: resting hand on top of fundus or abdomen
QANGQAIL PUAH  เดินที่: gentle shallow massage of abdomen, like effleurage
STIEP PUAH  เดินที่: to palpate, but not deep palpation, more gentle than ksy puah
TOB PUAH  เดินที่: to hold the fundus so the baby can’t rise up, press perpendicularly against
 CLEE  เดินที่: massage in a circular motion in one area
CRUNG  เดินที่: massage sides of abdomen and shake upwards, used sometimes to stop
KOS QANGQAIL  เดินที่: making the baby straight as above and then like qangqail puah
QANGRUN  เดินที่: vigorous back and forth motion in small area
ROLEIK  เดินที่: massage and shake
PTOT  เดินที่: when uterus hasn’t contracted after delivery of
TWEE SAWSAYE  เดินที่: like Thai massage all over body with some manipulation especially
SANGKOT  เดินที่: puts hand on top of fundus and presses down
TOB  เดินที่: ?same as sangkot; cradles fundus
REUNY  เดินที่: pushes down on fundus
BIBLIOGRAPHY


