Crossing Borders in Birthing Practices: A Hmong Village in Northern Thailand (1987-2013)

By

Kathleen A. Culhane-Pera, MD MA[1] , Sarinya Sriphetcharawut PhD[2] , Rasamee Thawsirichuchai[3], Wirachon Yangyuenkun[3], Peter Kunstadter, PhD.[3]

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1. West Side Community Health Services, Saint Paul Minnesota USA.
2. Occupational Therapy Department, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand.
3. Program for HIV Prevention and Treatment, Institute de Recherche pour le Developpement (IRD), France, and Chiang Mai University, Chiang Mai, Thailand.

Corresponding author:
Kathleen A. Culhane-Pera
East Side Family Clinic, 895 E. 7th Street, Saint Paul, MN 55106
kathiecp@yahoo.com

Abstract

Background: Over the past several decades in Northern Thailand, there has been a contest of authoritative knowledge between the Hmong traditional birth system and the Thai biomedical maternity system. In this paper, we explore the contest in one Hmong village by describing the traditional and biomedical practices; families' birth location choices; and elements of authoritative knowledge. Methods: We built on a village survey and conducted an ethnographic qualitative case study of 16 families who made different pregnancy care choices. Results: The contest is being won by the Thai biomedical system, as most families deliver at the hospital. These families choose hospital births when they evaluate problems or potential problems; they have more confidence in the superior Thai biomedical system with its technology and medicines than in the inadequate Hmong traditional system. But the contest is ongoing, as some families prefer to birth at home. These families choose home births when they want a supportive home environment; they embrace traditional Hmong birth knowledge and practices as superior and reject hospital birth practices as unnecessary, harmful, abusive, and inadequate. Despite their choice for any given pregnancy, the case study families feel the pull of the other choice: hospital birth families lament loss of the home environment and express their dislike of hospital practices; and home birth families feel the anxiety of potentially needing quick obstetrical assistance that is far away. Conclusion: While most families choose to participate in the Thai biomedical system, they also use Hmong pregnancy and post-partum practices, and some families choose home births. In this village, the contest for the supremacy of authoritative birth knowledge is ongoing.

Keywords: Hmong Culture and Childbirth, Hmong in Thailand

Introduction

Dr. Prasit Leepreecha, in his introduction to the conference, implored social science researchers who explore the cross-border experiences of Hmong in the diaspora, to "investigate the external contexts of social-political borders, which are being imposed on Hmong people", and to explore "the development of Hmong people's own concepts, explanations, and experiences of such socio-political phenomena", in order to empower Hmong people as they face socio-political changes. In this paper, we explore the relevance of his remarks in the context of changing childbirth practices in one Hmong village in Northern Thailand from 1989-2013.

Throughout the world, when communities have been introduced to Western obstetrical services (whether through migration or through integration of practices into primary care medical clinics and hospitals), people have faced choices between two birth systems: a biomedical system embedded in Western cultural beliefs and values and traditional birth practices embedded in their traditional social, spiritual, cultural systems (Browner and Sargent 1990; Davis-Floyd 1992; Davis-Floyd and Sargent 1997; Daviss 1997; Jordan 1993; Michaelson et al 1988; Sargent and Briscoe 1997; Sesia 1997). These two systems are often in conflict, given that they are based on different cosmologies and are embedded in two different social power structures. Anthropologists who have studied people's choices between the systems have described how people render "authoritative knowledge" to one system of another. The attribution of "authoritative knowledge" can be a community process, where over time community members evaluate healers' knowledge and then afford authority based on their respect for that knowledge as well as respect for the social authority that the healer has gained in the community (Jordan 1993). People's conferring "authoritative knowledge" can be influenced by the existing social positions of individuals and institutions, both in village settings and in cities where medical care systems are combined with societal political, legal, and educational systems (Sargent and Briscoe 1997). The glamour of technological advances (even separate from their efficacy) can influence people's respect for high-technology systems over low-technology births (Jordan 1993), particularly when the use of technology is combined with medical personnel's specialized knowledge in hierarchical systems, whose authority is supported by their social positions in governmental, educational and medical institutions (Georges 1997; Sargent and Briscoe 1997).

Northern Thailand Study Village

Up the Mountain Village (pseudonym) is a White Hmong Village in Northern Thailand that has undergone significant social, economic, and cultural changes from 1991 to 2013. It expanded from a village of 513 people in 1991 to a community of 891 people in 2013. The village is about one hour away from the nearest city with clinics and hospitals, via a windy road that was paved in 2011 and a more direct but unpaved road that can be impassable in rainy season. The village's economy has

changed from subsistence agricultural practices with some cash activities in 1991 to a cash crop economy with some subsistence farming in 2013. With this change came an increase in household money and possessions, influencing communication (most households have televisions, VCRs and cell phones) and transportation (most households have motorcycles and many have pickup trucks). Concurrently, formal education has increased; most parents have had some primary education and many have had some secondary education. Religion has not change significantly, with the majority being Hmong-Animists and Buddhists and the minority being Christians. Throughout these years, the vast majority of the villagers have been Thai citizens, with access to the Thai public health care system (Wibulpolprasert 2013), and in 2002, a universal health insurance program (Hanvoravongchai 2013; Hughes & Leethongdee 2007). This insurance affords pregnant women antenatal care (ANC) at the health center and deliveries at a designated public hospital for their first two children. Historically, Hmong women in Southeast Asia did not receive formal antenatal care; they gave birth squatting in their homes, while being physically supported by their husbands from behind, and assisted by their mothers-in-law who caught the baby and tied the cord; and participated in a post-partum month practices to regain their health and strength, produce breastmilk, and maintain their fertility. (Culhane-Pera et al 2004; Liamputtong Rice 1997; Symonds 2004).

Slowly over the years, more *Up the Mountain Village* pregnant women have received prenatal care and have delivering at the public hospital. Inquiring about pregnancy care and deliveries revealed that the use of prenatal care increased from 27.9% in 1991 to 33.3% in 1999 to 81.6% in 2012 while the rate of hospital births increased from 7% in 1991 to 36% in 1999 to 83% in 2012.[1] In this paper, we describe the traditional and biomedical pregnancy, birthing, and post-partum practices; families' birth location choices; and elements of Hmong and Thai biomedical authoritative knowledge.

Methods

We conducted an ethnographic qualitative study in *Up the Mountain Village* from April 2013- July 2013, building upon previous surveys and ethnographic research from 1987- 2000 and a quantitative study about use of health care services (Kunstadter 2013), interacting with pregnant women and their families, and obtaining input from 4 female community advisors. We identified all 74 women with completed pregnancies in the previous 5 years, and categorized their completed 98 pregnancies into four groups: home birth without prenatal care (9%); home birth with prenatal care (8%); hospital birth without prenatal care (9%); hospital birth with prenatal care (74%). For this in-depth qualitative case study, we randomly chose cases from each category, having 8 women who had given birth at home (4 with and 4 without prenatal care) and 8 women who had given birth at the hospital (4 with and 4 without prenatal care).

Two researchers (KACP and RT, who speak, read and write Hmong) conducted case studies with the chosen 16 families. We completed semi-structured life-history

interviews with the 16 women, 12 of their 14 male partners, and 17 elderly relatives (13 women and 4 men) about their experiences with the women's pregnancies. We held a focus group at the end to discuss our preliminary analyses with 12 participants and 2 community advisors. The interviewers took detailed verbatim notes; the interviews were not audio-taped as our community advisors cautioned that families would not honestly share their critiques of the Thai health care system if the interviews were audio-taped.

Data analysis:
Three researchers (KACP, RT, SS) conducted inductive qualitative analysis, guided by grounded theory (Morse et al. 2009). Two team members (KACP and SS) worked together on the first five cases, inductively coding events about each pregnancy, organizing codes into categories, and creating the coding tree, which both researchers then used separately to code the remaining 11 case studies. Subsequently, all three team members discussed the coded and organized case study notes until we reached agreement about the codes and categories, and then all three researchers created matrixes together.

Ethical Considerations:
The Ethics Committee of Faculty of Associated Medical Sciences, Chiang Mai University granted IRB approval for the "Access to Care in Communities Study". Each participant signed a consent form, and received 200 Thai baht (about US$6.50) to compensate for their time.

Results:
In 2013, most of the 16 case study participants (Table #1) were married, were Thai citizens with Thai health insurance, were Hmong Animists/ Buddhists, and were farmers (although some women were merchants and half of their husbands were wage laborers) with a stated annual 2012 household per capita income at less than one US dollar/day. Most women and husbands had a primary or secondary education.

Through life-history questions, the 16 case study women revealed that they had 50 pregnancies in the previous 18 years (mean 3.1, range 1-6 pregnancies). About half were born at home (N=26, 52%) and about half were born in the hospital (N=24, 48%), a percentage for these 16 women that had not changed over the years. In addition, we asked the 13 female elderly relatives about their pregnancies**.** Over the previous 2-3 decades, the older women had 77 births (mean 6.2, range 4-8 pregnancies); most (N=71, 92%) were born at home and 6 were born at the hospital (3 to obtain tubal ligation, one for long labor, one because of "old age", and one because "now we know about hospital births".)

There were differences between traditional Hmong and biomedical Thai practices for normal births as well as for responses to problems that might arise. (See Table #2 and #3.)

Hmong cultural practices in "Up the Mountain Village"

Hmong culture has lessons for pregnant women, which are taught by family members and elders. Normal pregnancy and birth knowledge is diffused throughout society, such that pregnancies and births are treated as family-based events for the family to manage. While there is no Hmong term for "midwife" as a person who examines, evaluates, and assists every pregnant woman, there are elderly women and men in the village who are known to have knowledge and expertise in pregnancy and birth, and who assist when problems arise.

Pregnancy practices

Pregnant women are instructed to follow prescribed and avoid prohibited behaviors in order to ensure healthy babies and healthy pregnancies. Generally, they are told to eat well, work hard, and obey their elders and husbands. Specifically, they are admonished not to cut cloth or thread in their bedrooms (to prevent cleft lips and palates), not to think negative thoughts about deformed people (to prevent fetal deformities), and not to build stoves, houses or doors (to prevent miscarriages). If a woman develops problems, her family members contact healers to assess and treat the problem, including herbalists (*kws tshuaj*), shamans (*tus ua neeb*), and soul callers (*tus hu plig*). If a woman experiences abdominal pains or back pains, an experienced woman can move the infant into a better position. If cramping, a soul caller can call her soul. If there is fatigue, or if the baby does not move, there could be an unbalance of energies between the mother and her baby, which is rectified by a special soul caller so that if one dies, the other does not die also. If there is vaginal bleeding, a shaman will release the nature spirit who has entered the woman's body when she crossed a stream, tie a string around her belly, and build a wooden bridge outside the village so the infant's soul can walk home. In addition, the bleeding woman is told not to work hard in the fields, cross streams, jump, lift her arms above her head, and make love.

Home Births

At home, birth events are experienced within the family's social, cultural, and spiritual context. The laboring woman is in familiar surroundings, in the presence of her household and ancestral spirits (for animists), and is cared for by her family members---usually the mother-in-law and husband, and perhaps other people such as the husband's grandmother, aunt, sister, or father. During labor, the woman moves and acts as she desires, whether walking, lying, sitting, eating, or drinking. During delivery, the woman squats, supported from behind by her husband or female family member, and pushes with her contractions until the baby is delivered, when a female family member picks up the baby, cuts the cord with boiled scissors (or years ago with a clean sharp bamboo stalk). Once the placenta is delivered, the family member picks it up, and buries it at home (by the ancestral post if a boy and under the bed if a girl).

If problems occur during labor, birth and after birth, a panoply of people could institute a wide variety of actions. The family members who routinely support the woman can take some actions themselves, and they can call on middle-aged and

elderly women and men who are experienced in childbirth, have birth knowledge, and often are healers themselves. If the baby is deemed to be in the wrong position (by external palpation), a knowledgeable woman can turn the baby with her guiding hands. If the baby is deemed to be not moving down, a helper can lift the woman up from her sitting or squatting position, and shake her. If a woman is having a long painful labor, other actions are instituted. Elders can help the laboring mother ask forgiveness for her previous disrespectful actions to her in-laws that might be blocking the labor progress. Herbalists can give medicines (*tshuaj*) as teas to drink and poultices to put on fingers. Animist husbands or fathers-in law can ask household spirits to help (*laig dab*) while Christian family members can pray to Jesus. For animists, spiritual healers can call souls (*hu plig)*, communicate with souls to divine what spiritual problem may be occurring (*ua neeb*), make promises for future payments to spirits (*fiv yeem*), and separate the mother and infant's souls (*faib sia* or *faib plig*). And, if the shamans are not available, or there is inadequate time to do the full soul separating ceremony, many people can separate the mother and infant's souls by a ritual that involves splitting the woman's apron into two halves, wrapping the mother's half in her bedroom or around her waist and disposing the baby's half outside the house. If the baby is born not breathing, family members say that resuscitating an infant is more successful if the cord has not been cut. To resuscitate an infant, they squeeze the baby's mouth open, suck air from the mouth and then blow air into the mouth, perhaps placing a shirt over the baby's mouth (which may add power to the process). If the placenta does not fall, husbands can consult their household and ancestral spirits (*laig dab*), family members can lift and shake the woman, and ritual specialists (*tus ua khawv koob*) can encourage the placenta to fall. In addition, if these practices are not successful for each of these problems, families can travel to the hospital where doctors and nurses can use their technology and machines (see below.)

Post-partum practices

After birth, women immediately eat a blackened boiled egg, bind their abdomen with cloth and sit by the fireplace, where they will stay for three days on a grass or synthetic bed that soaks up their blood. At the baby's third day of life, animist families perform a naming ceremony to call the baby's soul (*hu plig*), and a Catholic family performs a Catholic welcoming ceremony. For one month after the birth, women stay in or near the house, not working outside in the yard or fields; breastfeed their babies; wear clothes, a hat, and perhaps socks and gloves to stay warm and protect them from the wind; and eat a post-partum diet consisting only of hot soft rice, chicken and eggs (but may add pork after the first 2 weeks). Meanwhile, family members do the household chores and agricultural work, burn the blood soaked grass bed, and wash the woman's bloody clothes outside, burying the bloody water so that animals will not eat the blood. Family members and others can visit, with restrictions signified by a sign outside the door so people who enter know that a woman is in her post-partum month.

Hmong cultural interpretations

These animistic cultural birth practices occur at home under the protection of the

household and ancestral spirits and under the care of family members, with assistance as needed from knowledgeable village elders and healers. The various practices are seen as facilitating the normal process of birth (such as moving during labor and squatting during birth), dealing with the spiritual aspects (delivering in presence of household and ancestral spirits and dividing the mother and infant's souls if needed), addressing social concerns (such as conflicts between family members that might be blocking the labor process), and addressing the physical, social, and spiritual issues that could cause birth problems. The cultural post-partum practices have several purposes: to promote blood flow so the blood does not stagnate in the uterus and cause future pelvic pains and infertility; prevent hemorrhage so a woman does not die; restore the women's heat that she lost with the blood flow so she is healthy and not arthritic in old age; support breast milk so the baby does not die; and properly dispose of the bloody clothes so that the blood's potentially deadly force (*sub*) does not harm family members (such as hemorrhages during car accidents or field accidents with machetes.)

Thai Biomedical Maternity Cares

When women attend their local government prenatal clinic and hospital, the case study participants describe receiving vaccines, tests, and treatments, to help them and their babies "be healthy and be safe", although they have limited understanding of the vaccines, tests, and treatments they are receiving.

The differences between birth experiences at home and hospital are vast. At their assigned government hospital, women are in institutional surroundings, accompanied by nurses and students while their family members remain outside, and their household and ancestral spirits are far away, unable to watch and help. During labor, women lie in narrow beds in one room with other laboring women, are forbidden to eat, drink or move out of their bed (and perhaps even be tied down if they do not stay in bed), and receive periodic cervical exams (which most women dislike). During delivery, women are whisked to a delivery room and placed on their backs with their feet in stirrups, where nurses or doctors routinely do episiotomies, deliver the baby, catch the placenta, massage the uterus, sew up the episiotomy, give injections, and clean up the birth fluids. The women and their infants stay in the post-partum ward, without access to hot water and without a heater in cold winter months; given hospital food that does not comply with their traditional post-partum practices; and are visited by family members who do bring post-partum foods and hot water, but only during visiting hours.

If there are problems (whether long labor, and baby does not come out, or placentas do not fall) nurses and doctors can use "technology": give medicines, massage the uterus, do an episiotomy, use a vacuum to deliver babies, and do a C-section operation for the mother, as well as use medicines, oxygen, machines, and resuscitation for the infant. These trained hospital nurses and doctors generally act without involving the woman or family in their decisions, except they are obligated to inform family members and obtain a signature on a consent form before they perform a C-section and tubal ligation.[2]

Choosing Home or Hospital Births

The families who choose home births stress their confidence in healthy pregnant bodies, which do not need specialized medical help. They enjoy home birth experiences—with their families, in the presence of their familial spirits, able to move and eat as they desired, and able to receive help if problems occur by Hmong healers and, if needed, by doctors at the hospital. They detest hospital birth experiences—having to labor and deliver without their families, having to accept hospital processes instead of deciding for themselves (in terms of positions, activities, timing, eating, drinking), and not being able to start Hmong cultural post-partum practices. In addition, they distrust hospital staff. From their own experiences or others' stories, they know that hospital staff can treat them poorly: scold them, speak rudely and discriminate against them as they are poor and are minority ethnic people. They fear that staff can perform harmful procedures without their permission and without family members watching over them: including episiotomies, uterine massage, C-sections, and tubal ligations. Those who had previous C-sections and those who had more than 2 infants were afraid that doctors would impose their medical will to operate, which they would not be able to refuse.

The families who choose hospital births stress that there can be unknown risks during delivery, which might require doctors' quick assistance for a healthy mother and baby. They emphasize the safety of hospital births over the quality of their birth experiences. They express wanting to be close to doctors' medicines, machines, technology, and C-sections in case they have problems. And they like certain procedures, such as intravenous fluids, injected medicines to decrease blood flow, vaccinations for the mother and infant, birth certificates, and nurses cleaning up the birth mess. For these benefits, they are willing to tolerate hospital staff with poor attitudes or rude speech; accept difficult processes (being alone without their family members, not being able to move, and not being able to start post-partum foods) and undergo procedures that they do not like (cervical checks, uterine massages, routine episiotomies). In addition, they speak disparagingly about village-based home births. They express their fear of home births; if unforeseen problems develop that could harm the mothers and/or infants, then they could not count on the village traditional helpers (family members, elders, and healers) to help them. They bemoan the lack of knowledge and skills, as well as the loss of traditional knowledge and skills (several elderly knowledgeable women have died).

In hospital settings, women say they are reluctant to express their desires about some aspects of care (i.e., squatting during delivery, wanting hot water) and their refusal of other aspects (i.,e , episiotomies). Most women say they cannot express their displeasures as they feel vulnerable to discrimination, noting that they are poor minorities in Thai society where health care providers "scold" (*cem*) highland ethnic minority people and treat them worse than Northern ethnic Thais. When asked if we could work together, take these results to the Thai public health services, and ask for changes in processes, they express concern that their complaints and demands would be seen in a negative light, which could harm their

relationships with public health officials. As poor uneducated minority people on government insurance, they would be seen as presumptuous and ungrateful when they want to be seen as respectful and grateful, and they would be vulnerable to punitive harmful procedures or to the withdrawal of desired services.

The contrast between preferences of home and hospital births illustrates a contest of authoritative knowledge. (See Table 4.) When people render authoritative knowledge to Hmong traditions and dislike hospital practices, they choose home births—they trust their bodies and birth processes; believe in their elders; have few fears about problems they could not handle "up the mountain"; and detest hospital experiences or are afraid of forced medical procedures. When people value the authoritative knowledge of doctors and not traditional healers, they seek hospital care—they want the safety of doctors being close by; have fears about current physical problems or about potential physical problems; and know that traditional Hmong practices cannot provide effective care for their problems.

Discussion

Hmong in Thailand have "crossed borders" by borders coming to them--through Western obstetrical systems being brought by the Thai government through the primary health care system. While more Hmong women and their families have chosen hospital births over time, not everyone has. As revealed by this study in one White Hmong village in Northern Thailand, there is a contest for supremacy of authoritative knowledge between traditional and modern obstetrical systems.

Overall, the contest between the traditional birthing system and the biomedical system is being won by the hegemony of the Western biomedical system in connection with the Thai government health care system. Hmong families generally choose hospital births "in case there are problems" and specifically choose hospital births when there are problems they assess cannot be adequately addressed in the village. While many acknowledge that normal deliveries can occur at home, they have lost confidence in the traditional healing system to give birth to healthy babies cared for by healthy mothers, fearing that no one can adequately assist with potential complications. Rather, they express their confidence in the superior biomedical system with its technology and medicines. These families confer authoritative knowledge to the superior Thai biomedical system over the inadequate traditional Hmong system.

But the contest is ongoing, as this study shows. The families who choose home births are confident of the traditional Hmong birth knowledge and practices to deliver healthy babies with healthy mothers. In addition, they assert that doctors should learn from their knowledge (i.e., external cephalic version instead of C-section, squatting instead of episiotomies, and laboring/ delivering with family instead of alone), expressing the superiority of traditional Hmong knowledge. These families concurrently reject hospital birth practices as unnecessary, harmful, and even abusive (i.e., separated from family, forbidden to move and eat, subjected to

episiotomies, C-sections, and possible tubal ligations, and unable to start post-partum practices), expressing the inadequacy of Thai biomedical system.

While birth location choice is binary (home or hospital) and the contested authority is polarized (traditional or Thai biomedical), people's experiences are not as opposed as they might seem. One, their experiences overlap. Those who choose hospital births acknowledge and long for the positive aspects of home births (with family, not having to travel, and starting post-partum care) and also dislike the negative aspects of hospital births (being alone, being treated rudely, and having episiotomies). Similarly, those who choose home births acknowledge that they live with the anxiety that they might need quick assistance, when they are one hour away from the hospital. This interaction and change from old to new practices is an aspect of acculturation. Two, the contest is more about birth location than about other aspects of pregnancy, including prenatal and post-partum practices. Many of those who obtain prenatal care and seek hospital births also obtain traditional Hmong healing practices, and the vast majority follow traditional post-partum practices after arriving home. These continued pregnancy practices reveal the strength that traditional pregnancy concepts continue to have for women and their babies' health. While anthropologists (Jordan 1993; Sargent and Bascope 1997) describe that when authoritative knowledge is given to one system over another, people experience that favored system as "supreme", "right" and "natural" and view the other system as "inferior" and "wrong", that absolute division is not occurring (or has not yet occurred) in *Up the Mountain Village*. Currently, both systems continue to function, side by side, as illustrated by how the vast majority of village women follow traditional Hmong prenatal and post-partum practices.[3]

Limitations

This qualitative study is based on case studies with 16 women, and not on all 74 women who had given birth in the previous 5 years. While we chose the 16 case studies to represent both home and hospital birth experiences, the fact that 74% of all pregnancies in the last 5 years received prenatal care and ended at the hospital indicates that the vast majority of villagers choose to be part of the biomedical birth system, and embrace the Thai biomedical authoritative knowledge more than the case study families. The study was located in one village and does not represent other Hmong villagers' experiences in Thailand. It does not include the perspectives of health care professionals about prenatal care and childbirth practices, institutional changes in maternity care over time, or Thai society's changes from traditional Thai perspectives to biomedical practices. Other aspects of the study, such as who made decisions about maternity care, and what factors they considered, and changes over time are addressed in other articles (Culhane-Pera et al. 2015a and 2015 b.)

Conclusion

Over the past several decades in Northern Thailand, there has been a contest of authoritative knowledge between the Hmong traditional birth system and the Thai

biomedical maternity system. This contest has occurred in the context of larger social, economic, and cultural changes in Hmong society, where Hmong have "crossed-borders" by the borders being brought to them. The hegemony of the biomedical system, is successfully convincing the majority of Hmong families that home births are dangerous due to inferior traditional birth practices and hospital births are safer due to superior biomedical obstetrical knowledge, medicines and technology. However, the Hmong traditional system is active, as some families choose home births, and most families engage in traditional Hmong pregnancy and postpartum practices. In this village the contest for the supremacy of authoritative knowledge between the Hmong traditional system and the Thai biomedical system is ongoing.

Footnotes:

1. The data were gathered differently. In 1991 and 1999, we gathered histories of 0-6 year-old children; 98% and 97% of all children were included in 1991 and 1999, respectively. In 2013, we surveyed 81 (100%) women who had been pregnant in the previous 5 years.
2. It was common knowledge that one villager had had a tubal ligation without her permission during a consented C-section in 1991.
3. Other studies of change in maternity care in Thailand have noted that traditional ethnic Thai prenatal and post-partum practices have continued to happen at home to varying degrees while births occur at medical facilities (Liamputtong 2005; Muecke 1976; Whittaker 1999).

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Table 1: Social and Demographic Characteristics of Case Study Participants

	16 Women	**14 Husbands***	**17 Elders**
Age Mean years (range)	28.4 (20-37)	31.8 (27-39)	49.2 (48-65)
Gender –N (%)	16 (100%) female	14 (100%) male	13 (76%) female 4 (24%) male
Thai citizenship	100%	100%	100%
Thai health insurance	100%	100%	100%
Marital status –N (%) Married Divorced Widowed	 14 (88%) 2 (12%) 0	 14 (100%) 0 0	 13 (76%) 0 4 (24%)
Religion –N (%) Hmong Animism/ Buddhism Christian	 15 (94%) 1 (6%)	 13 (92%) 1 (6%)	 15 (88%) 2 (12%)
Primary occupation -N (%) Farmer Merchant Wage laborer	 13 (81%) 2 (13%) 1 (6%)	 8 (57%) 0 6 (43%)	 16 (94%) 1 (6%)
Formal education –N (%) None Primary Education Secondary Education	 5 (31%) 7 (44%) 4 (25%)	 1 (7%) 10 (71%) 3 (21%)	 15 (88%) 2 (12%)
Thai language –N (%) Understand, not speak Speak, not read or write Speak, read and write	 0 5 (31%) 11 (69%)	 0 1 (7%) 13 (93%)	 4 (24%) 13 (76%) 0
Family income per capita, 2012 in Thai Baht (US$)	9,886 B (US$320)	9,163B (US$305)	
Number of pregnancies, mean (range)	3.1 (1-6)	3.1(2-5)	
Years since –mean (range) First pregnancy Most recent pregnancy	 10.3 (2-18) 1.4 (0-4)	 10.6 (4-18) 1.4 (0-4)	

* 14 husbands completed questionnaire and 12 husbands participated in interviews.

Table 2: Differences between routine home and hospital birth practices

	Home birth practices	**Hospital birth practices**
Place	Home: own bed, fireplace, and household/ ancestral spirits.	Institution: hospital labor and delivery rooms.
People	Mother-in-law and husband. Other women may assist.	Nurses/ doctors/ students. Family waits outside.
Labor	Can move, stand, walk, eat, and drink as desired. For pain: move, be with family	Stay in bed with IVs, cervical exams. Unable to move, eat/drink as desired. For pain: told how to breathe
Birth	Squat for delivery, husband behind. Female relative picks up baby, cuts cord, takes care of placenta.	On back with feet in stirrups. Nurse or doctor does episiotomy, delivers baby and placenta.
Afterbirth (1-3 days)	Sit on grass bed, bind uterus. Families clean up mess Eat blackened boiled egg initially. Eat eggs, chicken and rice. Drink hot water. Sit by fire for 3 days.	Medicine and uterine massage. Vaccine. Nurses clean up mess. Eat regular food. No access to hot water. Go home at 2-3 days after birth.
Post-partum (30 days)	Eat hot soft rice, chicken, eggs. Drink hot water only. Wear hat, coat, maybe gloves. Do not work. Stay at home, avoid wind. Breastfeed infant.	Eat and drink anything. Return to see nurse. Breastfeed or bottle feed infant.

Table 3: Differences for birth "problems" between home and hospital

Problems	**Home - Actions**	**Home - People**	**Hospital – Actions**	**Hospital - People**
Baby wrong position	Turn baby.	Elder women	C-section	Doctors Surgeons
Baby not move down or out	Lift mother up and shake her.	Family Elder women	Episiotomy Vacuum C-section	Doctors Doctors Surgeons
Long labor	Split mother's apron in two pieces. Forgiveness ritual. Medicines (*tshuaj*) Magic (*khawv koob)* Spirits *(ua neeb, fiv yeem, hu plig, faib plig, laig dab*) Go to hospital.	Family Elder women Herbalist	Medicines Vacuum C-section	Nurses Doctors Surgeons
Retained placenta	Lift/shake mother. Medicines (*tshuaj*) Magic (*khawv koob)* Spirits *(laig dab*) Go to hospital.	Family Elder women Healers	IV medicines Remove Operation	Nurses Doctors Surgeons
Hemorrhage	Bind uterus. Medicines (*tshuaj*) Magic (*khawv koob)* Spirits *(laig dab*) Go to hospital.	Family Elder women Healers	Massage Blood Operation	Nurses Nurses Surgeons
Baby not breathe	Pinch mouth. Suck/blow in mouth. Go to hospital.	Family Elder women Healers	Resuscitation IV medicines Oxygen Machines	Nurses, doctors Nurses Nurses, doctors Doctors

Table 4: Elements of Authoritative Knowledge

	Hmong traditional	**Thai modern**
Place	Home Mountain	Institution Thai city
Birth meaning	Physical, social, cultural, and spiritual event	Physical event
Who has knowledge	Diffuse - women/family/healers	Limited – trained specialists
Who has power	Woman, family, healers	Nurses, doctors, institutions
Who decides about actions	Normal- women/family Problems- family/healers	Nurses/doctors/ institutions. Women have no input

Appendix: Condensed Interview Guide

I. Life History: For each of your / the woman's pregnancies, through the years:
When? Where? Outcome? Pregnancy cares? Antenatal care? Birth location? Post-partum practices?

II. Pregnancy experience / care
A. Please tell us about each pregnancy. What advice or treatment did you get? Traditional? ANC?

B. Discussions about ANC:
1. Did you talk with anyone about going for ANC? What did you discuss?
2. Did anyone encourage / discourage you about getting ANC? Who? What? Why?
3. Why did you go, or not go?

C. Advantages and disadvantages of ANC.
1. What do you think are the advantages/disadvantages of ANC?
2. What do you think are the advantages/disadvantages of not getting ANC?

II. Birth experience / care
A. Birth. Please tell us about the birth for each pregnancy. What was the outcome? Where did you deliver? Why did you choose this place?

C. Discussions about where to give birth
1. Did you talk with anyone about where to deliver? Who did you talk with? What did they say?
2. Did anyone encourage / discourage you to birth at home or at the hospital? Who? What? Why?

D. Advantages and disadvantages of giving birth at home / hospital.
1. What do you think are the advantages of giving birth at home? At hospital?
2. What do you think are the disadvantages of giving birth at home? At hospital?
3. When do you think it would be better to give birth at home? At hospital?

E. What post-partum practices did you do or not do?

III. Improvements in pregnancy-related health services
A. What changes would you like to see in ANC services?
B. What changes would you like to see in childbirth services?

About the Authors:

Dr. Kathie Culhane-Pera is a family physician with a master's degree in anthropology. She has worked with the Hmong community intermittently in Chiang Mai Thailand since 1988 and in Saint Paul Minnesota since 1983, currently at West Side Community Health Services.

Dr. Peter Kunstadter, an epidemiologist anthropologist, has conducted qualitative and quantitative research since 1963 with highland minorities including Hmong in Thailand and California. He is Senior Investigator with the Program for HIV Prevention and Treatment, Chiang Mai Thailand.

Dr. Sarinya Sriphetcharawut is a lecturer at Department of Occupational Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai Thailand.

Ms. Rasamee Thawsirichuchai is a community researcher with Dr Peter Kunstadter at the Program for HIV Prevention and Treatment, Chiang Mai Thailand.

Mr. Wirachon Yangyeunkun is a community researcher with Dr Peter Kunstadter at the Program for HIV Prevention and Treatment, Chiang Mai Thailand