Health Care for Women International, 26:821–851, 2005

ISSN: 0739-9332 print/1096-4665 online
DOI: 10.1080/07399330500230920

Routledge
Taylor & Francis Group

Having A "Safe Delivery": Conflicting Views from Tibet

VINCANNE ADAMS and SUELLEN MILLER
University of California San Francisco, San Francisco, California, USA
JENNIFER CHERTOW
Stanford, California, USA
SIENNA CRAIG
Cornell, Ithaca, New York, USA
ARLENE SAMEN and MICHAEL VARNER
University of Utah, Salt Lake City, Utah, USA

In the Tibetan Autonomous Region (TAR) of the People's Republic of China (PRC) maternal mortality ratios remain among the highest in the world. Although traditional Tibetan medical theory, practice, and pharmacology include information on maternal and child health care, Tibet is one of the few societies in the world that does not have traditional birth attendants or midwives. Using ethnographic methods, we gathered data from individual interviews with rural Tibetan women (N = 38) about their beliefs and behaviors surrounding pregnancy and childbirth. Additional data were gathered through interviews with prefecture, county, and township health care providers. These data were used to develop a culturally appropriate village birth attendant training program in rural Tibet. We describe Tibetan women's perspectives of "having a safe delivery" in relation to concepts about "safe delivery" according to evidence-based medicine in the West. Our work also provides an example of the benefits and challenges that arise when ethnographic research methods are used to design and implement health care interventions.

Received 2 July 2004; accepted 20 June 2005.

Some funding for the project was provided by NICHD Global Network Research Grant # HD40613 in conjunction with The Bill and Melinda Gates Foundation. In addition to those individuals listed as authors on this article, we acknowledge the work of Kimberly Dukes, Pamela Novak, Pasang Tsering, and Eveline Yang, as well as invaluable input from the members of the Lhasa-based Curriculum Committee.

Address correspondence to Vincanne Adams, Department of Anthropology, History, and Social Medicine, 13 Heather Way, Mill Valley, CA 94941, USA. E-mail: vadams@itsa.ucsf.edu

Although efforts to improve the safety of mothers in delivery has long been a component of international health development efforts, specific interventions focused on this aspect of maternal and child health intensified in the post–Alma-Ata era (World Health Organization [WHO], 1978), and particularly with the realization that a focus on "maternal" health in the primary health care movement often was overlooked (Rosenfield & Maine, 1985). Renewed efforts focused specifically on ways to improve maternal and child safety through prenatal education, postnatal care, early immunization, and integrated development programs that tackled economic, infrastructural, and health problems simultaneously. In the years following these insights, health development programs have shifted away from general primary health care toward debates over what "safe delivery" entails and what should be included in the design and implementation of health care delivery and training interventions to help mothers "have a safe delivery." Projects began to focus on the best way to ensure the safety of mothers, particularly during home deliveries with skilled birth attendants (WHO, 1992, 1995, 1997, 1999). Debates over the safest form of delivery, although not completely resolved, spawned a good deal of inquiry about the resources available to women delivering in rural areas of resource-poor countries. In fact, exploration into the availability and skill levels of both traditional (empirical) and trained birth attendants gave rise to a recognition of the need for more data on the contextual determinants of maternal mortality in places where safe delivery programs were launched (Midhet, Becker, & Berendes, 1998), or in places where such programs failed because of insufficient attention to local cultures and contexts (Kaufert & O'Neil, 1989; Miller, Sloan, Langer, Winikoff, & Fikree, 2003; Roth Allan, 2002).

Although anthropology offers a rich and plentiful supply of ethnographic studies on the cultural and behavioral patterns of traditional birth experiences and reproductive safety (Davis-Floyd & Sargent, 1997; Sargent, 1982; Van Hollen, 2003), and studies of the cultural specificity of women's reproductive health beliefs are also plentiful (Dogdson & Struthers, 2003; White, 2004), health development programs have yet to adequately utilize these materials to improve programs in safe delivery. Likewise, with few exceptions, anthropological and primary Tibetan sources (Chin, 1992; Goldstein & Beall, 1990; Chophel, 1984; Gompo, 2002; Tapkey, 2002a, 2002b; Wiley, 2002) on pregnancy and childbirth have not been well utilized by health development programs aimed at Tibetan women. In this article, we report on the findings of a maternal health development program that sought to use ethnographic information gathered from rural women in order to develop a birth attendant training program in rural Tibet (TAR, PRC). We describe and analyze the relationship between Tibetan women's perceptions of "having a safe delivery" to perceptions about "having a safe delivery" according to evidence-based medicine in the West. Our work provides an example of the benefits and challenges that arise when ethnographic research methods are put to use in designing and implementing health care interventions.

BACKGROUND AND PURPOSE OF THE STUDY

In the year 2000, a team of biomedically trained health care providers and anthropologists from the United States established a working relationship with the Health Bureau of the TAR, PRC. This collaborative U.S./TAR team was invited to help strengthen the infrastructure for rural health care for mothers and newborns. The maternal mortality ratio (MMR) for rural Tibet was reported to be as high as 400–500/100,000 in some areas, and infant mortality within the first 12 months was reported to be as high as 20%–30% in some areas.[1] With funding support from both the NICHD (NIH/NICHD Global Network for Women's and Children's Health) and a charitable foundation (One HEART [Health, Education and Research in Tibet]),[2] the team established a research and training project that would simultaneously train rural health workers in safe delivery techniques and newborn care, and transfer knowledge of research skills by way of an evaluation of the effectiveness of the training program. A team of Tibetan providers and educators was established and, along with the U.S.-based clinicians and researchers, formed a Curriculum Development Committee (hereafter CC).[3] The goals of this team were to make sure that the curriculum used in training health workers was appropriate for the Tibetan context and that the design of the research and training were Tibetan oriented. Although the funding for the training project has now shifted away from NICHD and solely to One HEART, the project continues and already has achieved many of its initial goals.

Our team initially was assigned to work in four counties in rural Lhasa Prefecture: Medrogonkar, Taktse, Dulung, and Cheng Guan Chu.[4] Medrogonkar's county seat is a 2-hour drive outside of Lhasa, the capital of the TAR, with a population of approximately 40,000, with 8,861 women of reproductive age. Tibetans in this county were counted in government population records as being 15% nomadic, 70% agropastoralists, and 15% settled farmers.

---

[1]These statistics are based on reporting from both the TAR Health Bureau (2001–2003) and the Medrogonkar County Health Bureau (2003), as well as independent reporting as part of One HEART's midwife training program reporting, monitoring, and evaluation.

[2]One HEART (Health, Education, and Research in Tibet) was founded in 1999 by Arlene Samen, RN. For more information on One HEART's history and ongoing programs, see www.onehearttibet.org

[3]In addition to the foreign team (authors above), the committee included biomedically trained MDs in charge of maternal health from two biomedical hospitals in Lhasa; biomedicine- and Tibetan medicine-trained doctors from the Tibetan medical hospital (Mentsikhang); faculty from the Tibetan Medical College; representatives from the Municipal Health Bureau; and the director of maternal and child health at the county hospital in the Lhasa Prefecture county in which trainings and interventions have been focused.

[4]After the initial ethnographic phase of this research, it was decided to focus training efforts on Medrogonkar County only.

Taktse's county seat is a 1-hour drive outside of Lhasa, with a population of 25,550, and 6,276 women of reproductive age. Tibetans in this county were counted in government population records as being 10% herders (nomads or agropastoralists) and 90% settled farmers. Likewise, Dulung's county seat is a 1-hour drive outside of Lhasa, with a population of 40,700 and 12,694 women of reproductive age. Tibetans in this county were counted in government population records as being 15% nomadic, 60% agropastoralist, and 25% settled farmers. Cheng Guan Chu is periurban, located on the northeastern edge of Lhasa City, with a population of 44,142, and 13,649 women of reproductive age. Only approximately 1% of the population were identified as herders, while 32% were listed as farmers, and 67% of the population were engaged in wage labor (trade, business, service, etc.).

At the outset of the project, the TAR Health Bureau informed us that the MMR and infant mortality rates (IMR) were high and that the major causes of death during delivery were postpartum hemorrhage, sepsis, and obstructed labor. They also told us that up to 90% of women in Medrogonkar county did not deliver in township clinics or hospitals, despite the fact that there were rural clinics within a day's walk from most villages and that there was a hospital in the county seat, roughly 1–2 hours' drive on paved roadways from most township clinics. Given the fact that most of the deaths during delivery appeared to be preventable with appropriate medical care, we wondered why more women did not come for deliveries at the township clinics, or seek out the township or village doctors to assist deliveries at home. Health Bureau officials told us that the skill level of health workers at rural clinics and the inadequate transportation systems as well as lack of necessary surgical equipment at the county hospital were deterrents for women to birth at facilities. We did not know, however, if these were the reasons women themselves would give for not coming to the clinics, or asking for assistance during home deliveries.

In order to develop a training program that would equip rural health workers with the knowledge and skills they would need to adequately serve these rural populations, the CC decided that in addition to training students in appropriate medical techniques or safe delivery, students might also benefit from learning about what prevents rural women from coming to the clinics. What, in other words, did rural Tibetan women consider to be a "safe delivery"? And, how did their beliefs about safe delivery relate to their reticence, or inability, to access county health care infrastructure? With this information, we felt the team would be better equipped to incorporate meaningful health education messages to trainees and help overcome some of the obstacles preventing women from seeking delivery assistance. Although the project is ongoing and final evaluations of the impact have yet to be undertaken, we report on the findings from this preliminary aspect of the research here, in order to suggest the benefits of ethnographic methods during the initial stages of health intervention research.

METHOD

To collect data on rural health beliefs about pregnancy, antenatal care, and delivery, we mobilized a team of researchers who already were trained in ethnographic methods and semistructured interview techniques. This team included four U.S.-trained anthropologists or Tibetologists, who had been living or working in the TAR for at least 1 year (8 years in one case). Although some of these team members were fluent in Tibetan language, we also teamed these researchers with local Tibetan counterparts who were not yet trained in ethnographic methods. All of the U.S.-trained interviewers were female; one of the Tibetan counterparts was male. The Tibetans were taught the method of semistructured interviews and use of a questionnaire for interviews. In most cases, interviews were conducted in Tibetan with English translation (when needed). Interviews were then translated into English for coding and analysis by trained anthropologists.

Sample

Our project had permission to collect information in four counties, representing a wide range of household size, income, and occupation. Sampling of village women, therefore, included interviews with nomads, farmers, agropastoralists, and women who themselves, or whose husbands, worked as wage laborers. The sample size was 38 village women ($n = 38$) in four counties of Lhasa Prefecture. The team went house-to-house looking for mothers between the ages of 18 and 40 in the household. Cohort women were chosen randomly, as were villages in each county. A small portion of the interviews were conducted at a village clinic among female patients. If women met the eligibility criteria, they were asked if they were willing to participate. The University of California, San Francisco, approved the protocol and accepted verbal consent to participate in the research. Although each semistructured interview using the study questionnaire was conducted with one village woman of reproductive age, other women also contributed to the overall qualitative data collected. Often, an attending elder female relative would augment the interviewee's comments with her own experience and opinions. While we used the data to enlighten our analysis, we do not include the relatives in our sample size. Sampling of township, county, and prefecture health care providers was determined based on their willingness to participate in this study, as well as by their position within the local health care hierarchy.

Data Collection

Data were collected among village women with the use of an open-ended questionnaire (Appendix 1). Project anthropologists, in consultation with CC members and the project PI and co-PI, designed this questionnaire. The aim of this questionnaire was to elicit the basic set of concerns, concepts, and

terms used by rural women when talking about safe birth. Some of the interviews were tape recorded and later transcribed. In one-on-one conversations, answers to questions were written down in a combination of English and Tibetan on questionnaire templates. All interview data were reviewed by the PI and Co-PI.

Data Analysis

Data were first analyzed on the basis of frequency of recurring answers to particular questions. After this preliminary analysis, we developed a chart of beliefs and behaviors (Table 1). We also developed a subsequent questionnaire that focused on the key areas of concern for women during pregnancy, labor, and delivery. This second questionnaire was administered to another 8 women ($n = 8$), in order to validate our findings and add to our and the CC's ability to use this information in the development of our training program (Appendix 2). As with much qualitative research, our work was simultaneous, collecting data and analyzing in an iterative process. We began to see various concepts that emerged as a core process for rural Tibetan women of "having a safe delivery." We expand on this core process in the findings below.

FINDINGS

For nearly all of the Tibetan rural women we interviewed, "having a safe delivery" involved doing a variety of things to protect oneself and the unborn fetus and, later, the newborn, from potential harm. These efforts revolved around the following key categories: fear of attacks by spirits/demons and negative health effects of meeting strangers; fear of and taboos against pollution/defilement (*grib*); injunctions to silence and secrecy; various beliefs about diet and behavior; and various social and economic obstacles to receiving hospital care. We will now discuss each of these types of concerns, in turn.

SPIRITS

Many participants stated that the world is inhabited by a variety of spirit entities. Participants described one type of spirit as deities of the hearth, local mountains, rivers, rocks, and so on, called *sap dak*, *klu*, or *tsan*, as well as local village, clan, and household protectors (*yul lha*, etc.). They described another category of spirit entities as ghosts, zombies, or demons, who could be spirits of deceased humans who are literally "in between" the intermediate state between death and rebirth (*bar do*), or who are simply inhabitants of realms that coexist with the human realm and are generally nefarious, mischievous, and troublesome.[5] The first type of deity can be recruited to

[5]See Samuel (1993) and Karmay (1998) for more detailed classifications of these beings, in relation to Tibetan conceptions of sacred geography.

protect the natural and social environment or, conversely, they can become angered by being neglected or offended and cause misfortune ranging from natural disasters to loss of personal wealth, property, or human life through sickness. This manifestation of wrath on the part of such spirit entities often targets the most vulnerable members of a household: newborns and pregnant women.

The second class of spirits is temperamental and sensitive and their wrath can unknowingly be provoked. For that reason, participants told us that they were afraid to travel at night or to places where such spirit entities are said to roam. Or, if they have to travel to or through those places, they do so with ample protection from religious amulets, prayers, and blessings from lamas. Many rural Tibetans in our sample told us that they believe that spirits can be brought into homes by strangers. The spirits ride "piggy-back" on a person entering the home, without them knowing it. Where possible in the contemporary TAR, a family will sometimes employ a religious specialist to rid the household of unwanted spirits that have arrived on visitors' backs. For all of these spirit entities, Tibetans historically relied on the help of lamas and monks to ensure successful mediation, negotiation, offerings, and appeasement (cf. Aziz, 1978; Snellgrove & Richardson, 1968/1995; Kapstein, 2000). Within Tibet's more recent history, Tibetans in the TAR do not rely on religious figures as much as they used to.

Many participants said that infants are particularly vulnerable to spirit attacks. They are "closer" to the world of the intermediate state, and so they carry some insight about the world of spirits they have seen in that state. For this reason, Tibetans pay close attention to the behaviors of infants when strangers or visitors come to the home. If the baby cries just before the arrival of a guest, this can mean that the infant "sees" or intuits the arrival of some spirit beings. If the baby cries a lot when the guest arrives, this too can be taken as a sign that the baby's own "soul" or "essence" (*bla*) is uncomfortable with the visitor, for reasons of spiritual incompatibility.[6] Infants are also the most likely to become sick because of the action of spirits who are in their vicinity.

This particular set of beliefs and behaviors and fear of spirit entities often translates into rural women's suspicion of delivering in locations where there are strangers, such as clinics or hospitals. The fact that many people die in hospitals in rural Tibet, as is true everywhere, also works against perceptions that rural hospitals or clinics are places where one can go to be healed. Rather, they are likely to be seen as places that are dangerous because nefarious spirits associated with sickness and death are there. Fear of spirits riding in on someone's back also can be a deterrent to having an outsider come to the home for delivery.

---

[6]See Gerke (2003) on translation of the term *bla*.

POLLUTION (grib)

Most Tibetans believe in the existence of pollution (*grib*, pronounced "teep"), a form of spiritual contamination.[7] *Grib* can be associated with death, the blood of menstruation and childbirth, and the blood of death (from animals killed for consumption, for example). *Grib* also can be concentrated in people who do polluting work (this can include doctors or midwives). Many Tibetans articulate the notion of *grib* as not only the physical presence of polluting substances (blood, feces, garbage, etc.), but also the moral and spiritual ramifications of allowing such physical pollution to occur in the first place. Exposure to *grib* can weaken one's physical strength, health, and mental clarity. It is thought to have an effect on one's consciousness by way of one's own *bla*, which can be disturbed by the presence of these things.[8]

Tibetans try to avoid exposure to *grib*, and if exposed, they undertake ritual efforts to eliminate it. These rituals involve purification ceremonies with juniper incense (itself considered medicinal by both laypeople and practitioners of Tibetan medicine) and prayers. If spirit deities are exposed to pollution (*grib*), they too can become offended or vulnerable themselves; sometimes *grib* can prompt beneficent spirits and protector deities to flee. Therefore, domestic domains must be kept clear of such defilement, for fear of these protectors leaving.

Belief in *grib* can produce two kinds of behaviors in relation to pregnancy and delivery. The first relates to the mother's efforts to avoid exposing herself to *grib*. The second relates to things the mother can do to avoid spreading *grib* to others during her own delivery, because she is, by way of her own blood, a source of pollution for her household. According to our study participants, a mother will avoid going to places where there are dead persons or dead animals, such as the homes of butchers or commercial slaughterhouses, in order to avoid *grib*. More significantly, hospitals can be identified as places of death, although not always, as we will see below. A mother will sometimes deliver outside the living space of the home (in a tent outside the main nomad tent, in a cowshed or animal barn, or in a part of the house that is not inhabited by a spirit deity). Tibetans are particularly afraid of frightening away the *klu*, a class of serpent spirits that are most specifically associated with the purity of

[7]This concept is closest to the Hindu concept of *jutho* or ritual pollution, which some argue found its way into the Tibetan context by way of the introduction of Buddhism to Tibet in the seventh century and the subsequent conversions of aspects of pre-Buddhist Tibetan identity.

[8]If one perceives that one has been exposed to the harmful effects of *grib*, it can lead to disturbances of the humoral systems of the body (*rlung*, *mkhris pa*, and *badkan*—wind, bile, phlegm) or disappearance of the *bla*. These outcomes can, in turn, result in sickness. This connection between the spiritual and material causality of illness, as illustrated through how *grib* operates, also points to the ways that Tibetan medicine as well as folk practices aimed at maintaining individual and collective health and well-being share a moral component. The causality of illness is never solely biological.

water and the protection of the hearth, and that will be offended and perhaps flee if exposed to *grib*. In some places, a "fence" is constructed around the delivering mother, to "contain" the *grib* that comes with her delivery. This fence can include actual objects or walls (of a tent, for example), or it can refer to symbolic boundaries that are constructed with prayers and ritual implements, and symbolic markers of the home, usually in the form of stones painted in earthen pigments.[9] Although not all women deliver in such marked locations, when they do, these locations tend to be much more physically dirty than inside the living space. For instance, some women deliver in household storage spaces or animal sheds. From a Western biomedical perspective, women thus expose themselves to greater possibility of infection, despite their belief that to keep the family clean or unpolluted that they should birth in an area in which defilements can be concentrated and contained. This is an example of two conflicting views on "having a safe delivery"; although the animal sheds are "safe" spaces from the perspective of the Tibetan women, from a biomedical perspective it exposes women to increased risks of intrapartum or postpartum infection, as well as conditions of discomfort during delivery, lack of heat, warmth, and access to boiled water.

Finally, nearly all of our informants believed that the blood of childbirth is polluting. Therefore, they are reluctant to have birth helpers, who might be harmed by exposure to the blood of childbirth. Likewise, those few individuals who might be trusted to help at a birth—husbands, mothers-in-law, or other female relatives—will avoid cleaning the knife or whatever implement is used to cut the cord until after it has been used. After being exposed to the polluting effects of birth, it is washed and given a ritual cleansing. But, from a biomedical perspective, for a "safe delivery," the implement would be less likely to spread infection if it were cleaned before being used as well as afterward.

PRIVACY AND SECRECY

Tibetans often hold a wide array of beliefs about the need for, or role of, privacy and secrecy. The participants frequently mentioned their embarrassment over discussing anything having to do with reproduction or sexuality. This is partly because such things are seen as associated with pollution and to talk openly about these things is almost to bring them into existence and expose others to their harmful effects. Their shyness also stems from deep-seated sentiments about their own vulnerability. If others know things about you, then that information can be held against you or it can result in jealousy on the part

[9] The construction of fences with different colored stones placed at the top was intended as both an indicator to other villagers to not enter the house at that time due to pollution, and also an indication of whether the child was a boy or a girl (depending on the color of the stones) and subsequently at what time villagers should visit for the *bang sangs*, or purification ritual—2 days after the birth for girls, 3 days afterward for boys in this part of Tibet.

of other villagers. The latter was particularly true of pregnancies, as revealed through our research. Tibetan women frequently noted that if other villagers knew of their pregnancy, then they would be more vulnerable to miscarriage or a difficult delivery, often as a result of gossip or the jealousy of other village women. We heard many stories about women who were in extremely difficult labor for several days, and this often was attributed to the presence of such jealousy from other village women. Jealousy could come from other women who did not have children of their own, who lost children of their own, or who did not possess the gender of child that they preferred (female or male). Jealousy from others could also, it was sometimes believed, transform a male neonate into a female.

Associated with the concept of jealousy is the fact that many participants stated that there were benefits from keeping things secret. Participants told us they believe that if one anticipates something too much, it can adversely affect the course of events; therefore, keeping things secret is one way to prevent negative outcomes. One explanation for this belief is from Tibetan Buddhist and Tibetan medical ideas concerning the body and health. Tibetans believe that the three humors of *rlung*, *mkhris pa*, and *bad kan*, glossed as "wind," "bile," and "phlegm" (*nyes pa gsum*, or "three faults" in the literal translation), course the body and regulate all physiological functions. Each of the humors is associated with a "faulty" or "imbalanced" state: desire, hatred, and ignorance, respectively. The wind humor, associated with desire and anticipation, regulates all movement in the body (breathe, muscles, fluids, etc.). Thus, Tibetans believe that if one desires something strongly (such as anticipating the birth of a child), it can result in imbalances of the humors, especially if such desires go unfulfilled, agitating the wind humor.[10]

Interestingly, Tibetans also believe that the desires of others can also mobilize a kind of poison that will impact other persons. Thus, it is a priority for many rural participants to keep the news of their impending delivery a secret. Participants did not want others to know that they were pregnant so that they could avoid possible envy and the arousal of desire in others. Women we interviewed frequently mentioned that although their pregnancies were obvious to close family members or neighbors (despite the fact that they would wrap layers of aprons in such a way as to make it less obvious), in general, this did not lead to family or neighbors "talking" about the pregnancy or delivery. Participants said they rarely spoke about their impending deliveries with even a mother or female relative. When such conversations took place, it was often just to pass basic information to the

[10]This belief is likely related to Tibetan Buddhist perceptions of the immorality of attachment. It was considered bad luck and irresponsible to prepare for a child's arrival, whether by buying clothes or bedding for it, food supplies, or even choosing a name. The sentiment here was not simply that one should not prepare for an infant because there was a great likelihood it could die (not being attached to it), but that too much preparation could actually put the child at risk.

mother-to-be, such as, "Have a knife to cut the cord and a string or piece of cloth to tie it off." It is very uncommon for Tibetans to prepare for the arrival of a newborn, or even to purchase clothing or blankets in anticipation of an impending newborn, for similar reasons. Rather, they only acknowledge the birth of a child after it has arrived. The typical celebration is a *bang gsol* ceremony, usually held within the first 3 weeks of a newborn's life.

Although these ideas and practices were, for Tibetan mothers, key to "having a safe delivery," from a biomedical perspective, they could have potentially negative impacts on "safe delivery" by preventing prenatal care or preparation, and preventing other villagers in the community from helping the mother (with transportation, food, or supplies). All of these factors increased the likelihood that a mother might be alone during childbirth, "safe" from spirits and jealousy, but, from a biomedical perspective, an unattended childbirth is an "unsafe delivery."

DIET (PREGNANCY AND NEWBORN CARE)

Tibetan beliefs about how to eat well during a pregnancy were constrained by limited food resources. Nevertheless, we found that many women believed that a varied diet was best for a pregnant woman, and that although some foods were scarce (fruits, eggs, vegetables) they would eat them if they could. Most women told us that it was good for pregnant women to drink broth made from red meat stock and bones during or after delivery to restore her strength. They also said it was beneficial to drink warm barley beer (*chang*) during pregnancy, for its nutritional benefits. For some women, a healthy amount was only a few glasses per week, whereas for others a healthy amount was several glasses per day. For some women, *chang* was seen as a cleansing or sterilizing substance, reflecting both a "folk" belief and a connection to Tibetan medical theory, in which different forms of medicinal alcohols are detailed. Western biomedicine warns pregnant women to avoid alcohol, however, as drinking too much may cause fetal alcohol syndrome.

After a child is born, many women feel it is necessary to put butter on the fontanel in order to protect the child from spirit attacks, and also to put a pat of butter on the tongue to ensure that the baby would be blessed with good speech and intelligence. Also, most Tibetan women we interviewed felt that it was important to feed a child a small amount of butter (*mar*) or a prepared mixture of butter and barley flour (*rgyud mar* or *rkan mar*) within the first few days after birth.[11] Participants told us this was a way of grounding the new child in the household, providing a symbolic link to the household

[11] This practice varied depending on whether the child was born into a primarily nomadic or primarily farming family; among primarily nomadic families, butter is often given alone, while in farming communities butter is mixed with *tsampa*, roasted barley flour. The literal meanins of this practice vary: *rguyd mar* literally means "lineage butter," while *rkan mar* literally means "roof of the mouth butter," indicating the location where this first food is placed.

into which the child is born, and ensuring good *rten 'brel*, literally an omen or portent that is the basis for a good, auspicious relationship between this child and new family members—a "faith relationship" between the newborn and family members. Although practices surrounding this first feeding vary significantly culturally across Tibetan areas, the act of such a feeding (whether with butter and barley flour or only butter) was a consistent part of the rituals and newborn care described by participants. It is also a practice that is described in Tibetan medical texts to do with newborn care. In the *rgyud bzhi*, or the Four Medical Tantras, that form the basis of Tibetan medical theory, this act is described in a section devoted to care during the first 3 days of a child's life. The meaning of this act of giving a child butter is described as a means of ensuring the child will have a clear mind and clear, well-developed senses.

For many Tibetans milk products and barley are not merely seen as "nutritional" in a strictly biological sense. They are also symbolically significant: They are used as ablutions in religious rituals and are evoked through Tibetan oral and literary tradition as defining elements of Tibetan identity, marking off the produce of the high Tibetan plateau as distinct from that of lowland Han China, for instance (cf. Glover, 2003).

As such, feeding the newborn small amounts of butter and barley flour soon after birth is seen as a key component of "having a safe delivery." Yet these efforts to protect the infant and ensure its health and membership in the family may be in conflict with a "best practices" biomedical approach to newborn care. Many health development programs advise exclusive breastfeeding for the first 6 months in rural village settings, to reduce the risk of bacterial contamination and devastating, often fatal, diarrheal diseases. In view of the lack of hygiene in most rural households, this early feeding could be seen as increasing the risk of intestinal infections of newborns. And yet, Tibetan women are likely to see the deprivation of butter and barley as jeopardizing their infant's integration into the spiritual, social, and familial Tibetan life.

WORKLOAD

Although responses to concerns over workload for pregnant and newly postnatal women varied depending on the status of the family in the village, region, and livelihood strategies (e.g., nomads, farmers, and agropastoralists), participants told us that it was often important—or simply necessary—for women to work right up until the onset of labor. Some stated that heavy work would ease the delivery by keeping the mother strong, while others said that heavy work was not appropriate and could lead to complications during pregnancy, but that light work was appropriate. Some of the Tibetan women we interviewed also told us that the status of the woman in the family had a bearing on the perception of the amount of work a woman was expected to do while pregnant. If the mother lived in her natal community, surrounded by her natal family or even in her natal home, she was not expected to work as hard as if she lived with her husband's family or in her husband's village.

Although there is evidence from a biomedical perspective that continuing to engage in some physical work up until delivery can be healthy for the mother, too much strenuous work might be detrimental to her health. A particular concern with regard to Tibetan women is the belief that strenuous work in the last months of pregnancy is good, in view of the high rates of hypertension among Tibetan women. Women with preeclampsia should, in biomedicine's view, rest. Most participants did not attend prenatal clinics, however, and so did not know if they were hypertensive or not.

HOSPITAL/CLINICAL CARE

In many instances, women told us that they did not feel it was good to use the hospital (or local clinics) for delivery because they were afraid of the health workers, doctors, or nurses; could not communicate well with them; or were afraid of the kind of care they would receive once in the hospital or clinic. We witnessed miscommunication in hospital settings, in which health workers sometimes assumed that Tibetan village women would not or could not understand medical language, would be resistant to their advice, and would need to be spoken to in harsh tones in order to convey the seriousness of their messages. This was due to different education and social status, but to villagers, it often felt like admonishment and was seen as offensive and unnecessary. They were less likely to heed these caregivers' advice when it came to them in this form.

Participants also told us that they doubted the skill level and training of their caregivers in hospitals and clinics, particularly at the township and county level. We understood the rationale behind their doubts, as we learned that, although the government was trying to remedy this situation, many of the rural health workers had received minimal training in obstetric care, and even fewer in emergency obstetric care. Even in those hospitals that had personnel who were trained in emergency services, few providers in these settings had the ability to perform these services because they lacked medical equipment and supplies to do so. This greatly undermined villagers' confidence in the government-provided clinical services.

TRANSPORTATION

Rural participants also noted that it was sometimes impossible to use clinics or hospitals because they were simply too far away. Transportation by foot, horse, tractor, car, or truck was both arduous and sometimes quite expensive. In addition, many women or their family members had difficulty taking time away from household duties to make trips to township clinics or county hospitals for medical care, particularly prenatal and postnatal checkups. Women said they feared that the travel to a clinic would pose problems to them that might either jeopardize their birth or impede a speedy recovery. One woman said, "There was more pain and bleeding after delivery on the

roads home than during the delivery." If emergency care was sought during a prolonged delivery, families were as likely to call a health worker as they were to try to transport the mother to the hospital, but usually this action was begun far too late, considering the distances and difficulty of finding transportation.

FINANCIAL OBSTACLES

Finally, participants noted that even if they had access to clinics or hospitals and even if they were inclined to use them, they frequently were unable to do so because of the prohibitive cost. Although the state Cooperative Medical System (CMS) theoretically guarantees that household members are eligible for government reimbursement for medical care, including care sought during a delivery, few rural Tibetans know how to access this system; the government bureaucracy remains unfamiliar and daunting. The system itself is hard to navigate: Reimbursement schemes vary from township to township and county to county, often depending on the quality of the county hospital and health bureau directors. In some cases, families were unable to pay the fees required of them ahead of time because they simply did not have the cash. In other cases, families were unable to process subsidy forms in a timely manner, or were unable to fill them out correctly due to linguistic barriers. In other instances, women in need of emergency obstetric care have been turned away because they could not provide prepayment for the entire service, before their reimbursement from the government for a large percentage of the cost could be processed. So, even for those villagers who were not inhibited from using biomedical services because of cultural obstacles or long distances, they simply did not have the ability to pay for them. Of course, from both a biomedical perspective and from the public health literature on safe delivery, basic access to hospital referral, need-blind service, and low-cost or subsidized transportation are crucial. See Table 1.

DISCUSSION

Although we collected a good deal of information that was very region specific, in the sense that women in some areas believed in certain types of supernatural forces or inauspicious signs, and practices varied depending on whether women were from farming, agropastoral, or nomadic backgrounds, we learned that in order for our research to be useful for program development, we had to focus on the more widely held and widely practiced beliefs and behaviors Thus we developed a list that came to serve, as Pigg (1997b) notes, as a sort of index of "traditionalism"—although we recognize the essentializing effects of this sort of list. That is, there is no true uniformity of beliefs and behaviors even though we report on the accumulated views in this format for the purposes of establishing basic guidelines. The need to formulate such an index also points out one of the direct challenges of translating ethnographic complexity into simplified guidelines for development interventions.

TABLE 1. Rural Tibetan women's beliefs and behaviors regarding child birth

Beliefs and practices	Obstacles and resources	Possibilities for integrative medicine
1. Strangers		
Frighten child	− Absence of trained birth attendant.	Birth attendant becomes a nonstranger over the course of a pregnancy.
Spirit attacks	− Obstacle to visiting a clinic/hospital for prenatal checks/delivery or having a birth attendant visit the village.	Making sure that the female family members are given skills to help with births.
	− Woman potentially gives birth alone.	
	+ Keeps baby from associating with pathogens (prevents infection).	Reinforce benefits of not exposing baby to strangers other than health workers.
2. Pollution		
Fence to protect mother and child	− Avoidance of mother in need. Limited resources for help because others have fear of pollution.	Idea of pollution useful if it encompasses elimination of pollution before as well as after birth. Protective of the mother and child and protective against pollution. Merge where possible, e.g., hygiene helps eliminate "theep" (*grib*)
	+ Limiting visitors other than health worker decreases exposure to infection.	
Delivery location (e.g., not disturbing hearth spirit)	− Not having mother deliver in warm comfortable setting and not preparing a clean delivery space.	Prepare clean delivery space, i.e., contain "theep" by using a clean plastic sheet.
Delivery instruments (e.g., postpartum cleaning of knife that cuts cord)	− Not sterilizing instruments. Pollution does not always equal hygiene.	Cleaning instruments both before and after birth, boiling water, washing hands, cleaning genital area, keeping bodily fluids including blood contained to contain "theep" and protect mother.
3. Silence and secrecy		
Embarrassment	No preparation for birth. No alert to the community. No financial or community support, either in the case of a normal birth or an emergency.	Describe impulse toward discretion as good but need to take care of mother and child at all points as community responsibility.

(*continued*)

TABLE 1. (*Continued*)

Beliefs and practices	Obstacles and resources	Possibilities for integrative medicine
3. Silence and secrecy (*continued*)		
Bad luck to talk about birth		Use Women's Federation as a source of consciousness raising and community education about safe delivery; e.g., don't criticize women for being shy but encourage community not to ignore or abandon her if she is shy.
Not preparing bedding for newborn		Stress importance of preparing clean and warm bedding for the newborn.
4. Nutrition		
Drinking *chang* to fortify mother for birth	Fetal alcohol syndrome, low birth weight, decreased blood to brain of fetus.	Encourage no drinking and if drink, drink boiled *chang* to eliminate alcohol. Take home message: your child will be smarter if you don't drink nonboiled *chang*.
Do not eat wild ungulate meat		
Feed *gyuma* soon after birth to help strengthen child and prepare for adulthood and become a part of the house.	Feeding a child anything but breast milk up to 6 months can lesson immunity to disease and introduces pathogens.	Rub *gyuma* on baby's body or have mother eat *gyuma* and pass on its essence through breast milk.
Feed butter and place butter on fontanel after birth to avoid spirit attacks and sickness and for good luck		
During pregnancy, delivery, and postpartum, increase foods that are considered nutritional (e.g., eggs, bone soup)	Increase in calories and fluids during breastfeeding is important for optimum lactation.	Encourage mother to increase fluids and caloric intake during breastfeeding.
Belief that increase in intake of oily foods causes diarrhea in infants.	No biomedical correlation between increase in oily foods and diarrhea in infant.	Emphasize the good diet and calorie and fluid intake, especially fruits and vegetables.
5. Workload		
Work up to delivery easing delivery itself.	Biomedicine advocates that women avoid prolonged strenuous labor in last 3 months of pregnancy and no activity if hypertensive (swelling and high blood pressure).	Encourage community support for decreased heavy workload in last 3 months.

(*continued*)

TABLE 1. (*Continued*)

Beliefs and practices	Obstacles and resources	Possibilities for integrative medicine
5. Workload (*continued*)		
Work up to delivery can impede or prolong delivery or cause death of child and/or mother.	Status of family within the village and status of woman within the family bears on her workload especially if living with husband's family.	Pay attention to women's status in family and advise family to help her decrease workload.
6. Hospital delivery: Associated fears		
Women get scolded by doctors	Scolding by doctors not recommended since it impedes women's likelihood of going to the hospital.	Tibetan medicine can be a resource here because it places a priority on bedside manner.
Belief that transportation and roads not good: "more pain and bleeding after delivery on the road than during the delivery."	Cost of transport and hospitalization prohibitive.	Encourage families to be up to date on insurance payments. Consider having a village fund to pay for up front costs that will be reimbursed.
Normal delivery in the home enables women to move while they deliver and be surrounded by family.	Clinics and hospitals only use delivery beds with stirrups that preclude movement. "Better" for doctor but not the delivering woman.	Adjusting practices in the hospital to accommodate a variety of birthing positions and practices.
7. Other beliefs		
Prenatal risks associated with water mills, grain mills, knitting that cause problems with the umbilical cord around baby's neck.		
Benefit to crossing bridge at the time of delivery.		
Switching gender during delivery and just after delivery. (Bleeding story, rings and string)		
Monastery visits not uniform but women tend to go when there are problems with pregnancy and/or to name the baby.		
Ashes on the nose of the baby to protect from spirit attacks.		

In a sense, programs designed with the goal of both cultural sensitivity and replicability demand a distillation of local reality into generalizable indicators, in this case the "beliefs and behaviors" of Tibetan women on issues of pregnancy and childbirth. Yet the resulting list was not simply a guide to some common beliefs and behaviors found in rural Tibet in relation to childbirth; it was an instrument the CC could use to decide how much and what sort of interventions would be needed to be sensitive to and selectively change rural health behaviors in general, and, specifically, how a training program for township-level health workers should be structured.

Ethnographic research on rural Tibetan women's perceptions of safe delivery provided useful information about not only why women did not feel "safe" coming to clinics but also how they created a situation for safety during delivery in their own homes. When presented to the CC, some of these behaviors and beliefs were seen as obstacles to "having a safe delivery," while others were seen as useful starting points for designing interventions that supported or made use of existing beliefs. Different members of the team ended up holding different perspectives and opinions on how best to use, or not use, the data. Should public health outreach and education efforts organized by the municipal hospital try to target these beliefs and eradicate them, supplying only useful biomedical information with the intention of changing existing beliefs and behaviors? Or, should the team attempt to create a training curriculum that took into account the possible ways that certain beliefs or existing behaviors might be utilized for improving health outcomes in the biomedical sense?

For example, some members of the team felt that the curriculum might usefully tap into existing beliefs about "pollution" to convince women to come to clinics. Deliveries in clinics, they said, could be explained as "more safe" to rural women in the sense that the blood of delivery would be far from the home and disposed of quickly and easily. In later interviews with nomad women, we found that this idea was already at play. In one family that lived close to a township clinic, a daughter who had delivered there noted how much "cleaner" the delivery was in the clinic than at home precisely because at the clinic the staff made sure to clean up the blood quickly and remove it from mother and child.

Similarly, the belief that it was harmful to allow strangers into the home soon after delivery probably reduced the likelihood of exposing newborns to infections from outsiders. It was felt by some that these beliefs and behaviors should be encouraged or at least not targeted for "eradication." Conversely, the prohibitions on sharing information about pregnancy and alerting neighboring families about an impending delivery was, from the biomedical perspective, potentially harmful, as was the fear of allowing strangers to aid in deliveries. Finally, some of the data produced ambivalent responses, such as existing dietary beliefs and behaviors surrounding pregnancy and delivery. Some of these were considered healthful (tendency to eat more nutritious

and varied foods during pregnancy and use of bone soup at delivery), while others (feeding butter or *tsampa* flour or both to the newborn, for example, or drinking *chang*) were considered harmful.

One of the interesting results of our team efforts to deliberate the various merits of inclusion or exclusion of this kind of ethnographic information was that it became clear that many of the rural health workers who would be recruited as students in the training programs were themselves more likely to be familiar with, and believe in, these ideas than were people on the CC. In other words, their starting point for recognizing the cultural importance of such things as pollution, the dangers of strangers, and so on was much closer to that of the participants who conveyed this information to us than they were to most of the urban, educated health care providers who make up the CC. Many of the health workers believed in these things as much as rural women did. Therefore, our strategy shifted from educating rural health workers about cultural beliefs to working with rural health workers' own beliefs and behaviors to improve the quality of care and their ability to educate rural women.

Other interesting outcomes of the research were that it confirmed official government perceptions that transportation was an obstacle to utilization of clinics, and the officials' perceptions that rural women did not necessarily trust the skill levels of their providers. Our research uncovered that participants sometimes believed that the health workers were not skilled enough or that the technological resources of the clinics or hospitals were poor. If miscommunication occurred, this also worked as a deterrent. Finally, we found that in addition to rural participants' perceptions that the clinics were not "nice" places to go, financial prohibitions on utilizing even an undesirable clinic were great Although the government has a financial scheme for assisting rural families with their health care costs, it is clearly not yet functioning well enough to encourage greater use of government resources when it comes to having a safe delivery.

CONCLUSIONS

Use of ethnographic information in designing health interventions proved useful in the case of our research and training program in rural Tibet. The CC was able to make use of the information to design culturally sensitive materials for rural health workers who, in this case, were able to think more objectively about their own beliefs and behaviors, which were in some cases shared with the rural women they hoped to serve. Rural health workers were questioned about the benefit of having discussed some of the ethnographic research findings in their trainings, and most gave positive responses, noting that it helps them to know how to approach women about these behavioral patterns and to understand the cultural, economic, and spiritual constraints that work against women asking for attendance during deliveries.

The benefit of this research should not be overstated here. In fact, weighted against the other kinds of information that were considered high priority for the training of rural health workers, this information was seen by some members of the CC as rather insignificant. What many health workers and CC members stated was that it was more important for them to learn basic biomedical knowledge and techniques for safe delivery than to spend time thinking about how to integrate these practices with traditional beliefs and behaviors. Some team members even stated that no time should be spent considering the problem of integration or eradication of traditional beliefs and behaviors at all, since new biomedical knowledge that was based on effective outcomes would quickly supplant those old beliefs anyway. One CC member put it this way:

> It is not so important to collect this kind of information, because doctors and the health workers have to give scientific information, and traditional ideas must be changed by scientific ideas. Some rural patients, maybe they deliver at home. Okay, so they believe in these things. But we have to give a scientific education to them and teach them to go to the hospital.

Although the rural health workers we interviewed argued for the benefits of using ethnographic information to conduct outreach and education activities with their potential clientele, we found nomad women who told us that the most important thing for rural health workers to have were the medical skills for safe delivery. One woman told us:

> First they [the rural health workers] should know how to deliver safely. It is better to have the doctors [rural health workers] know about that because they can give better help.

At the same time, most women also noted that there could be benefits from providers being sensitive to the cultural beliefs of rural women:

> We prefer to get help from medically skilled and knowledgeable doctors. It is not so important for them to know about these other things [*grib*, jealousy, and so on]. But, for example, if the health worker knows how to remove the bloody things quickly, then that would be good.

In conclusion, the ethnographic information gathered and qualitative methods used in the design and implementation of this safe delivery training program in rural Tibet was useful to both Tibetan and U.S. team members. Interviews conducted with rural women, township and county health workers, and CC members helped map the terrain of "safety" and "safe delivery" as understood from both biomedical and Tibetan perspectives. Obstacles and possibilities for improving maternal and child outcomes were identified and discussed from a variety of perspectives. Significant discussion and debate emerged, however, about the extent to which this explicitly "cultural"

knowledge could, or should, be incorporated into training programs. This was particularly true among urban Tibetan medical practitioners who were given the task of developing and implementing this rural health worker training curriculum. For the most part, all CC members stressed the need to impart as much (primarily biomedical) knowledge as possible in the course of these intensive 3-month trainings, and not to spend much time discussing women's beliefs and behaviors about pregnancy and childbirth. Those with a background in Tibetan medicine stressed some "cultural" information should remain in the curriculum, citing the ways some of these "folk" beliefs and behaviors are linked to Tibetan medical theory, and also implying the ways such inclusion of Tibetan cultural and medical viewpoints also allowed for continued expression of Tibetan identity in the contemporary sociopolitical context of the TAR. In the end, an ambivalence surrounding the idea of "cultural sensitivity" emerged from local-level rural women and township health workers to urban Tibetan medical and biomedical providers, as well as U.S. collaborators. This ambivalence reflected an emergent embrace of international biomedical "standards" of health care interventions, although this was not uniform or uncontested. Both members of the CC and township-level trainees stressed that such issues were best directed through health outreach programs overseen by state-endorsed community-based outreach workers (such as township and county branches of the Women's Federation) rather than be a part of more clinically oriented trainings like the ones One HEART had focused on to date.

Although we recognize Pigg's (1997a, 1997b) insights that what often happens in international health development is that the foreigner is considered the "expert" and local knowledge is effaced/erased and discredited in aid projects, this was not the overriding logic of our case study in Tibet. In our case, we often found that the "foreign-based" orientation was focused on paying more attention to local, cultural knowledge, while the Tibetan-based orientation was to embracing biomedical approaches that could not accommodate local, cultural realities. In fact, many of the foreign-based assumptions about the "best" way to develop a curriculum for training township-level health care workers in safe delivery techniques and practices, specifically by advocating cultural competence, were challenged repeatedly, not because this sort of information was irrelevant, but because the contexts within which it would be useful already were contested domains of meaning and practice in the TAR. Being "culturally competent" in this case, in part, meant supporting the decisions of the CC, even if this meant literally abandoning the ethnographic materials nearly entirely in the final curriculum. What we initially had assumed would be advancing "cultural competency" or "cultural sensitivity" in health development meant, in this case, rejecting the sorts of information that would, in other contexts, be seen as a defining basis for developing cultural competence in the international health development world.

Finally, we are left with the ethical question that is raised by the challenges that surface through this sort of project: What do you put to the forefront, when weighing the relative importance of local knowledge and

cultural sensitivity versus the poor health indicators and immediate health needs of a group, in this case Tibetan women and children? Perhaps one answer to these ethical questions is that the question itself should be phrased differently. Is it fair or possible to weigh these options against one another, when they are so deeply intertwined? How can one provide an effective intervention that requires education and behavioral change, if one does not really know why people do what they do to begin with, or if one does not know how to prioritize villagers' needs clearly? In case after case (Ferguson, 1994; Roth Allan, 2002), we have seen that the best planned and best intentioned efforts to deliver direct aid fail, precisely for the reason that they have not taken into account cultural factors. In our case, U.S. and Tibetan providers and researchers continue to collaborate and refine the safe delivery curriculum for use in ongoing trainings, with the hope that rural health workers will be able to provide women and children with quality health care, in ways that account for, and learn from, the specific socioeconomic and cultural circumstances at play in Tibet.

REFERENCES

Aziz, B. (1978). *Tibetan frontier families: Reflections on three generations from D'ing-ri*. Durham, NC: Carolina Academic Tibetan Press.

Chin, N. (1992). *Child growth in three Tibetan villages: An assessment of environmental, biological, and social determinants*. Unpublished master's thesis, Department of Community and Preventative Medicine, University of Rochester, Rochester, NY.

Chophel, N. (1984). *Tibetan superstitions regarding childbirth. Tibetan medicine series*. Dharamsala, India: Library of Tibetan Works and Archives. 7, 25–29.

Davis-Floyd, R., & Sargent, C. (Eds.). (1997). *Childbirth and authoritative knowledge: Cross-cultural perspectives*. Berkeley: University of California Press.

Dodgson, J. E., & Struthers, R. (2003). Traditional breastfeeding practices of the Ojibwe of Northern Minnesota. *Health Care for Women International 24*, 49–61.

Ferguson, J. (1994). *The anti-politics machine: "Development," depoliticization and bureaucratic state power in Lesotho*. Minneapolis: University of Minnesota Press.

Gerke, B. (2003, September). *Body concepts in Tibetan medicine and the understanding of the "subtle life essence" (bla) and its relevance for medical therapy*. Paper presented at the 10th International Association of Tibetan Studies Conference, Oxford University.

Glover, D. (2003, September). *Milk and barley: Folk concepts of health in rGyalthang*. Paper presented at the 10th International Association of Tibetan Studies Conference, Oxford University.

Goldstein, M., & Beall, C. (1990). *Nomads of Western Tibet: Survival of a way of life*. London: Serendia Publications.

Gompo, Y. Y. (2002). *'bdu rtsi, snying bo yan lag brgyad pa gsang ba man ngag gi rgyud ces bya wa*. Lhasa, TAR, PRC: Tibetan Autonomous Region People's Publishing House.

Kapstein, M. (2000). *The Tibetan assimilation of Buddhism: Conversion, contestation, and memory*. Oxford: Oxford University Press.

Karmay, S. (1998). *The arrow and the spindle: Studies in history, myth, and ritual in Tibet*. Kathmandu: Mandala Book Point.

Kaufert, P., & O'Neil, J. (1989). Cooptation and control: The reconstruction of Inuit birth. *Medical Anthropology Quarterly*, *3*(4), 427–442.

Midhet, F., Becker, S., & Berendes, H. W. (1998). Contextual determinants of maternal mortality in rural Pakistan. *Soc. Sci. & Med.*, *46*(12), 1581–1598.

Miller, S., Sloan, N., Langer, A., Winikoff, B., & Fikree, F. (2003). Where is the E in MCH? Evidence-based interventions to prevent maternal mortality in developing countries. *J Midwifery Womens Health*, *8*(1), 10–18.

Pigg, S. L. (1997a). Found in most traditional societies: Traditional medical practitioners between culture and development. In F. Cooper & R. Packard (Eds.), *International Development and the Social Sciences Series: Essasy on the History and Politics of Knowledge*. Berkeley: University of California Press.

Pigg, S. L. (1997b). Authority in translation: Finding, knowing, naming, and training "traditional birth attendants" in Nepal. In R. Davis-Floyd & C. Sargent (Eds.), *Childbirth and authoritative knowledge: Cross-cultural perspectives*. Berkeley: University of California Press.

Rosenfield, A., & Maine, D. (1985). Maternal mortality—A neglected tragedy: Where is the M in MCH? *Lancet*, *2*, 83–85.

Roth Allan, D. (2002). *Managing delivery, managing risk*. Ann Arbor: University of Michigan Press.

Samuel, G. (1993). *Civilized Shamans: Buddhism in Tibetan societies*, Kathmandu: Mandala Book Point.

Sargent, C. F. (1982). *The cultural context of therapeutic choice: Obstetrical care decisions among the Bariba of Benin*. Holland: Reidel Publishing.

Snellgrove, D., & Richardson, H. (1995). *A cultural history of Tibet*. Boston: Shambala Publications. (Original work published 1968)

Tapkey, T. (2002a). *deng rabs gso rig gi prug gu skye bsu byed stangs dang 'phrod bsten skor* [pamphlet]. Lhasa, TAR, PRC: Trace Foundation.

Tapkey, T. (2002b). *dban ldan rgyud bzhi las ma bu bde thang yong b'i chos* [pamphlet]. Lhasa, TAR, PRC: Trace Foundation.

Van Hollen, C. (2003). *Birth on the threshold: Childbirth and modernity in South Asia*. Berkeley: University of California Press.

White, P. M. (2004). Heat, balance, humors and ghosts: Postpartum in Cambodia. *Health Care for Women International*, *25*(2), 179–194.

Wiley, A. S. (2002). Increasing use of prenatal care in Ladakh (India): The roles of ecological and cultural factors. *Social Science and Medicine*, *55*, 1089–1102.

World Health Organization (WHO). (1978). *The Alma Ata Conference on Primary Health Care. WHO Chronicle*, *32*(11), 432–448.

World Health Organization (WHO). (1992). *Traditional birth attendants*. A joint WHO/UNFPA/UNICEF statement. Geneva: Author.

World Health Organization (WHO). (1995). Maternal health and safe motherhood: Findings from concluded research studies. *World Health Statistical Quarterly*, *48*, 2–3.

World Health Organization (WHO). (1997). *Strengthening midwifery within safe motherhood*. Joint ICM/WHO/UNICEF congress workshop (Oslo). Geneva: WHO Division of Reproductive Health.
World Health Organization (WHO). (1999). *Reduction of maternal mortality*. A joint WHO/UNFPA/UNICEF statement. Geneva: Author.

APPENDIX 1: INITIAL BASELINE QUESTIONNAIRE

Village Level Information (home interviews with women)

Village: House #:
Herder or farmer:
Age of people in house
Parity
Health insurance schemes?
Household financial resources for medical needs?
Check woman's neck for evidence of goiter
How many people in the household?

1. Pregnancy history
   a. How many times were you pregnant?
   b. # live born children
   c. # babies died / # lost in pregnancy
   d. Maternal beliefs surrounding
   e. Preconception (before pregnancy)
      1. Dietary (include all foods, fruits, and drinks including alcohol)
      2. Spiritual
      3. Social (birthspacing, community rivalries/curses, government regulations, number of children)
      4. Determination of gender
      5. Behavioral prohibitions (travel, dress)
      6. Eliciting folklore/advice "my mother told me. . . . "
      7. Appropriate attendants
      8. Medicines that can/cannot be taken
   f. Pregnancy concerns
      1. At what point is it socially acceptable to talk about/reveal pregnancy to family members/nonfamily members?
      2. Prenatal visits? Any why or why not? To whom?
      3. Dietary (include all foods, fruits, and drinks including alcohol)
      4. Spiritual
      5. Spiritual or alternative healers
      6. Except for the doctor, lama, and tsi pa, what other people do you visit for help?

7. Are there monasteries or special places that you visit while pregnant?
8. Social (birthspacing, community rivalries/curses, government regulations, number of children)
9. Determination of gender, can it be influenced?
10. Behavioral prohibitions (travel, dress)
11. Eliciting folklore/advice "my mother told me. . . . "
12. Appropriate attendants
13. Medicines that can/cannot be taken
14. Special hygiene rules?

g. Labor and delivery
   1. What are the signs that labor has begun?
   2. Where does the delivery occur and why?
   3. Who helps with delivery and why?
   4. Are there special hygiene practices for delivery?
   5. Handwashing? Who? Why? When?
   6. Cleaning of genital area? With what? Why? When?
   7. Was the birthing area cleaned? Yes, how and when, why?
   8. If no, why not?
   9. Materials used in delivery (cloth, paper, boiled water, etc.)
   10. How, when, why?
   11. Is there a possibility of changing fetal or newborn gender?
   12. How and why?
   13. Eliciting folklore/advice "my mother told me. . . . "
   14. Medicines that can/cannot be taken
   15. Why would you go to a clinic? Why not?
   16. Who are the most important people to call during a delivery?
   17. Social: Who is and is not allowed to be present during delivery? Why?
   18. Spiritual concerns (timing of birth, blessing, divinations, etc.)

h. Postpartum
   1. At what point is delivery complete?
   2. Dietary (include all foods, fruits, and drinks including alcohol)
   3. Spiritual
   4. Is it necessary to purify the birthing area, the mother, the child, the family, the house?
   5. Social: Who should and should not be present after birth?
   6. Is there a possibility of changing gender of the baby at any time after birth, even up to a year?
   7. How and why?
   8. Eliciting folklore/advice "my mother told me. . . . "
   9. Treatment of placenta and umbilical cord (How do you assist in removing it, how and when do you cut the umbilical cord, and what do you do with it afterwards?)

10. Medicines that can/cannot be taken
11. Why would you go to a clinic? Why not?
12. Behavioral prohibitions (travel, dress)
13. Appropriate attendants
14. Medicines that can/cannot be taken
15. How long did you rest after delivery?
16. How long should a woman rest after delivery?
17. Should the mother be secluded, from whom, for how long?
18. Why?

i. Neonatal
   1. Dietary for infant (when breast feed, other foods or substances)
   2. Schedule for the newborn (when does the baby sleep, when does the baby eat, when should the baby be awake?)
   3. Spiritual (Who names, etc. blessings, by whom? Is there a time of purification? How long does this last?)
   4. Social (Do they seclude newborn? How long? Why? How do they show the baby to others? Who does the baby stay with? Why?)
   5. Eliciting folklore/advice "my mother told me. . . . "
   6. How do you determine the gender of the newborn?
   7. Is there a possibility of changing newborn gender?
   8. How and why?
   9. Behavioral prohibitions (travel, dress)
   10. Appropriate attendants
   11. Medicines that can/cannot be taken
   12. Why would you go to a clinic? Why not?
   13. Does a doctor or midwife visit you after the birth? If so, how often?
   14. Immunizations (Does the baby receive shots? At what time and where?)

j. Assessment of knowledge (What do mothers know about pregnancy?)
   1. Conception (Do you know how women get pregnant?)
   2. Pregnancy complications (What are the most common problems in pregnancy and delivery?)
   3. Newborn complications (What are the most common reasons newborns die?)
   4. How can a mother keep her child healthy?
   5. Contraception (What does she use?)
   6. How are these practices different from previous generations?
   7. When pregnant, when delivering, and after birth, what are things you think might cause problems?
   8. Pollution?
   9. Spiritual danger/attacks?
   10. Presence of people outside the family/strangers/others that you know?
   11. Going to hospital?

12. Who would be consulted for:
    A. Prenatal care
    B. Delivery care
    C. Postpartum care
    D. Newborn care
2. Of what would an uncomplicated delivery consist?
3. What are typical problems women experience in regards to their health during pregnancy (housework, outside work, financial problems, care of other children, relationship with husband, relationship with mother/mother-in-law, community relations, government regulations, other)?

SAFE MOTHERHOOD SURVEY 2

Questions

General Information

Interview Date
Interviewer
County
Township
Village
Farmer or Herder

1. Name of Mother
2. Other Household Members (list by relationship and age)
3. Mother's Age

Prenatal Care

4. Number of pregnancies (including miscarriages)
5. Number of living children
6. Did you lose any babies while pregnant?
    a. If so, how many?
    b. What years did that occur?
    c. How many months' pregnant were you? (1) (2) (3)
    d. Do you know why you lost the child? (check only those mentioned)
        1. Work too hard
        2. Ate food that caused miscarriage
        3. Didn't have enough food
        4. Didn't have enough good or variety of food
        5. Sickness of mother
        6. Other
        7. Don't know
7. How do you calculate the number of months' pregnant?

8. Before delivery did you tell a health care worker that you were pregnant?
   a. Yes or no?
   b. Why or why not?
   c. If yes, during what month?
   d. Who did you see?
9. During last/current pregnancy did you see anyone for prenatal care?
   a. Yes or No?
   b. Which pregnancy?
   c. Who did you visit?
   d. Did they come to your home or did you go to the clinic?
      1. When? (How many months' pregnancy?)
      2. What did they check? List
10. If you did not see anyone, why not?
   a. Cost of medicine (preference: biomedicine or Tibetan medicine)
   b. No transportation
   c. Not necessary, no medical problem
   d. Other
11. Did you tell any other villagers that you were pregnant?
   a. Yes or no?
   b. Why or why not?
   c. If yes, during what month?
12. Did you bleed during pregnancy?
   a. Yes or no?
   b. Less than a normal period?
   c. More than a normal period?
13. Did you drink chang while pregnant?
   a. Yes or No
   b. Why or why not?
   c. How much chang did you drink in a week?
   d. Did you boil this chang or just heat it?
14. Did you change your diet while pregnant?
   a. Yes or no?
   b. How?
   c. If you did not change your diet, why not?

Delivery

15. Have you ever delivered a baby in the hospital/clinic:
   a. Yes or no?
   b. If yes, how many times?
   c. Was it a good experience? (Describe her response below)
   d. If no, why not? (check only those mentioned)
      1. Cost?
      2. Transport?

3. Not necessary/no medical problem?
4. Embarrassment
5. Time or labor problem
6. Fear of strangers, doctors, spirits, pollution
7. Other reason
8. If pregnant now, will you deliver in the hospital/clinic?

e. How many hours away from the hospital/clinic are you (driving, riding, walking)?

16. During your last delivery did you have a helper?
    a. Yes or no?
    b. Who?
17. Who is the best person to help? (rank order of preference)
    a. Mother
    b. Mother-in-law
    c. Other female relative
    d. Husband
    e. Other male relative
    f. Nonrelative friend
    g. Health care worker (midwife, village doctor, township doctor)
    h. Hospital doctor
18. Where did you deliver you last baby? (describe location)
    a. Why did you deliver there?
    b. Did you worry about "theep" (*grib*)
19. Before delivery did you clean the birth place?
    a. Yes or no?
    b. How?
20. Did you wash any part of your body?
    a. Yes or no?
    b. If yes, where?
    c. When did you wash?
21. Did your helper wash his/her hands before delivery?
    a. Yes or no?
    b. With what?
22. Who cut the cord?
    a. How was it cut?
    b. Was the utensil cleaned before use?
        1. How?
        2. Why?
    c. Was the utensil cleaned after?
        1. How?
        2. Why?
23. Did you have any complications during your labor?
    a. Yes or no?
    b. Causes: bled a lot?

c. Causes: convulsion?
d. Labor more than 2 days?
e. Breach birth?
f. Twins?
g. Other?
h. Did you seek/get outside help?
i. Did the mother have to be moved to another location?
j. If so, how?

24. Do you know any woman who has died during or right after childbirth?
    a. Yes or no?
    b. How long after delivery?
    c. What year/how long ago?
    d. Where?
    e. Do you know the cause?
        1. Bleeding
        2. Fever and abdominal pain
        3. Severe headache
        4. Other
    f. What is the most common reason a woman has problems during delivery?

Postpartum

26. After delivery, was anything done to help you recover?
    a. Yes or no?
    b. What?
    c. Why?
    d. How many days rest did you take?
27. Did a health worker check you after delivery?
    a. Yes or no?
    b. If yes, what did they do?
    c. When did they check you?

Newborn

28. After the baby was born, did you clean the child?
    a. Yes or no?
    b. If yes, what?
    c. How?
29. After your baby was born, did you wrap it in anything?
    a. Yes or no?
    b. If yes, what?
    c. Did you clean it before you used it?
30. When did you start breastfeeding your baby?

31. Did you feed the baby anything else?
    a. Yes or no?
    b. If yes, when?
    c. What?
    d. Why?
32. Did the health worker check your baby?
    a. Yes or no?
    b. When?
    c. Where/Who?
33. Did any of your newborns die?
    a. Yes or no?
    b. How many?
    c. What year did this occur? (list each)
    d. How old was the baby?
    e. Do you know why the baby died?
        1. Causes: Was the baby too small?
        2. Causes: Did the baby get sick? With what?
        3. Causes: With what? (Breathlessness, diarrhea, cold, spirit attack)
        4. Other?
34. What are the common reasons newborns get sick? (check only those mentioned)
    a. Fever?
    b. Breathless?
    c. Too small?
    d. Diarrhea?
    e. Spirit attacks?
    f. Pollution?
    g. Colds or stomach aches?
35. What do you do to help a baby when it gets sick?
36. Did you take any medicines during pregnancy, delivery, and recovery?
    a. Yes or no?
    b. If yes, what (biomedicine or Tibetan medicine?) and why?