UNDERSTANDING AND EVALUATING
TRADITIONAL PRACTICES
A GUIDE FOR IMPROVING MATERNAL CARE

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March 1990

The Maternal Nutrition and Health Care Program was funded by the Office of Nutrition and Health of the U.S. Agency for International Development through cooperative agreement #DAN-1010-A-00-7061-00
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INTRODUCTION

One of the principal solutions proposed by the international health care community to decrease current levels of maternal morbidity and mortality is increasing and improving access to nutrition and health care services, typically by addressing problems of understaffed and underequipped facilities, long distances and inadequate transportation to facilities, and the costs of services. Such improvements would increase utilization of services, and thereby reduce the rates of illness and death associated with pregnancy and childbirth in developing countries.

Health care providers must go beyond increasing facilities or services, however. Another important factor in the underutilization of maternal care services by women from traditional communities is cultural acceptability. All cultures have traditional ways to manage pregnancy and childbirth, and in many communities throughout the world these practices are still very much in use. The modern care option is often considered inappropriate or unacceptable by potential users. An understanding of traditional practices and beliefs would benefit not only care delivery, but other components of maternal nutrition and health care, such as nutrition and health education, information dissemination, and personnel training.

While the decision to eradicate or encourage a traditional maternal care practice can be made based on medical judgments, the consequences of that decision in terms of ease of behavior change is based on a cultural evaluation. In most instances, therefore, maternal care practices and beliefs have to be understood on a culture-specific basis before a judgment is made. In one Côte d'Ivoire community, women do not go to the village maternity center to give birth because the midwife requires them to bring a complete layette for the baby. According to local beliefs, any preparation for the unborn child, such as the purchase of clothes, is seen as tempting the spirits who might consequently take the child away. In this society, infants do not wear clothes until the seventh day after their birth (Timyan 1987b). Knowledge and accommodation of this belief by the village maternity center would vastly increase the number of births assisted by the trained midwife.

Efforts to improve maternal health through improved access to health care facilities, therefore, can be strengthened significantly by identifying and using traditional care options women have within their household and community, and integrating them into the modern system. In addition to making facility-based maternal care more acceptable, an understanding of local beliefs and practices is essential for improving the outcome of home deliveries. An estimated 75 percent of all births in developing countries still take place at home or elsewhere in the community—assisted by

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1 See Leslie and Gupta 1988 for a review of maternal care service utilization in developing countries.
a traditional midwife, a family member, or managed by the woman alone - and this level of home births is unlikely to drop substantially in the near future. The circumstances under which women give birth at home can be significantly improved with a basic knowledge of those circumstances.

The integration of traditional care into modern care involves three stages: investigation, evaluation, and action. Investigation leads to the identification of the relevant traditional care practices and the beliefs that explain or underlie them. Each practice then undergoes evaluation both for its medical implications and for its cultural significance. Finally, action is taken on the practice: a decision is made to discourage its use, to ignore it, to promote its use in home-based care, and/or to integrate it into facility-based care.

The investigation of traditional maternal care can be greatly aided by examining existing literature sources, typically ethnographic descriptions, that either provide specific information on local practices and beliefs or suggest avenues of inquiry. In any case, additional investigation in the community must be done, if only to verify or update what has been already described, and to gain an adequate understanding of the rationale for the practices. The evaluation of the individual practices for their cultural significance is based in part on the strength of the underlying belief.

This guide provides a framework for investigating and evaluating traditional practices that affect maternal nutrition and health in order to take action on them. It is intended to assist program planners involved in all aspects of maternal care programs in linking traditional and modern, informal and formal care. The guide provides a sampling of documented traditional maternal care practices and beliefs from around the world to help researchers formulate questions for local investigation. To facilitate the investigation process, the guide also offers a discussion of various concepts and methodologies useful for conducting research on traditional maternal care.

Certain key terms are used frequently in this document. Maternal care refers to the special care given to, or taken by, women during pregnancy, childbirth, the postpartum period, and lactation. It covers both home care and the care provided by the formal health care system. Government or private sector organizations provide formal maternal care through institutionalized services at all levels in hospitals, clinics, and maternity centers. Women have better or worse access to these services depending on a variety of factors, such as the distance and transportation to the service or the cost of the service. Informal care refers to the services provided outside this system, whether self-care in the home or care provided by traditional birth attendants or traditional healers, including herbalists, priests and shamans, itinerant pharmacists and injectionists. Traditional and modern are used as shorthand terms to distinguish those practices that derive from the local culture and are indigenous in nature from those practices based on health systems and medical knowledge from a wider, more universal perspective. Modern medicine, founded on a biomedical, scientific model of
reality, often takes a radically different approach to the prevention, diagnosis, treatment, and explanation of disease and illness than traditional medicine, which is based on local beliefs about the origin of disease and the nature of therapy. Discussion of informal maternal care systems typically focuses on rural communities in that they are the principal locus of traditional beliefs and practices, and the sector least served by formal health facilities. Much of what is discussed in this guide, however, applies equally to those urban communities where traditional lifestyles are maintained and/or where formal maternal health services are not available or easily accessible.

It should be recognized in the distinction between traditional and modern that all cultures are in a state of transition, and that even the most traditional communities are undergoing rapid social change. Analyses of current informal maternal care systems typically reveal a mix of modern and traditional maternal care practices within the same community. It may be more appropriate to speak of a continuum between traditional and modern care, with some households and individuals operating at the traditional end of the continuum and others at the modern end, while the majority lie somewhere in between.

A SAMPLING OF TRADITIONAL MATERNAL CARE PRACTICES AND BELIEFS

Much has been written, especially in the anthropological literature, about traditional maternal care practices. Knowledge of a range of these practices from other cultures can give program planners a framework for researching a local culture's specific pregnancy, childbirth, and lactation practices.

Cultural concepts underlying maternal care

Beliefs and practices have to be understood in light of more widely held general concepts. These underlying cultural concepts are often found throughout a region, even though individual cultures, or even individual communities, may have different specific beliefs based on them. For example, in Western cultures, the belief in eggs brought by a rabbit (United States of America) or spilled by a bell (France) to celebrate a spring festival (Easter) is based on the underlying concept of rebirth and renewal that is felt to occur during the spring season. The belief in some African and Asian cultures in the presence of mischievous or malevolent spirits waiting to disturb a parturient mother is based on a more widespread concept that a supernatural world inhabited by spirits functions similarly to and parallels the natural world.

Physical and emotional equilibrium. In many parts of the world, physical and emotional health as well as social equilibrium is considered to be a state of balance, an attitude that affects normal
social interactions and applications of traditional and modern medicine. Thus many people believe that strong emotions, such as anger or fright, should be avoided during pregnancy to avoid complications such as miscarriage or premature birth (Cosminsky 1983, p 145). Some Mexican women, for example, believe that excessive anger may cause knots to form in the umbilical cord or lead to miscarriage. The pregnant woman should therefore focus on pleasant things and those around her should protect her from upsetting circumstances and people (Kay 1982, p 13).

In more than 34 countries, the equilibrium principle has been identified as extending to the perceived balanced conditions of "hot" and "cold" in referring to the state of the body, foods, and medicines. In these cultures, individual foods have an intrinsic "hot" or "cold" nature, independent of the food's temperature at a particular time or its spiciness, and a perceived "imbalance" requires dietary or medical intervention. In South India and in many other countries with strong ideas of hot and cold, pregnancy is traditionally considered to be a time of increased body heat, much like the process believed in these cultures to occur in ripening fruits. Pregnant women are thus naturally "hot." But overheating is seen as dangerous. Minor swelling of the feet or hands that is seen as an ordinary sign of increased body heat during pregnancy does not get much attention. But symptoms such as a burning sensation during urination, scanty urine, or white discharge are felt to be significant signs of overheating. Modern medicine is generally believed to be "heating" for the body and thus dangerous during pregnancy, so these conditions are most often treated by herbal medicines or diet rather than modern medicines (Nichter and Nichter 1983).

In cultures where a woman is considered "hot" during pregnancy, she is generally considered to be "cold" during the postpartum period and during lactation. Accordingly, certain behavioral and dietary changes are prescribed to restore "lost heat" and to protect her from further "cold" and "wind." In Chinese cultures, women who have recently delivered or are lactating are directed to avoid "cold" foods, as women are not only normally yin ("cold") in nature, but are considered to be suffering in this period from an extreme lack of "hotness" (Pillsbury 1978, pp 13-15, Koh 1981, p 88). One reason many women in these cultures avoid hospital births is that the hospital protocol violates deeply-held beliefs about hot and cold conditions and food, elements that are essential, in their minds, for their health during the immediate postpartum period.

Ritual pollution and vulnerability. The notion of ritual pollution in which a person is viewed as "unclean" because of association with a powerful substance or event is widespread throughout the world. Many cultures consider childbirth (as well as menstruation) to be polluting. In South Asia and in many other cultures the pollution of childbirth is considered reason to isolate the woman - and sometimes anyone else who is linked to the birth - from normal contact with others during the birth and the immediate postpartum period (LeVitt 1988). Typically a purification ceremony is held at the end of a specified period of time to remove the pollution and return those involved in the
childbirth to normal community life. Cultures where isolation for childbirth is the traditional norm provide an excellent opportunity to encourage the use of clinics or hospitals for delivery and "lying in." In this case delivery and postpartum recovery rooms should be kept separate from the rest of the hospital facilities. A "purification ceremony" could take place when the women are discharged after an appropriate amount of time has elapsed.

Whether or not childbirth and the postpartum period are considered to be situations of pollution, they are almost universally considered to be a time when women are particularly vulnerable to physical and spiritual forces. Preventive measures against ill-intended spirits are included in precautions taken by new mothers and those attending the birth in many cultures. Often these take the form of rituals such as prayers, the use of candles, incense, special amulets, herbal baths, special foods, animal sacrifices, and application of oils and herbal mixtures. Attention to these preventive measures and their cultural importance and allowing certain ones to take place in formal care facilities is an essential step in encouraging traditional families to use these facilities.

Folk beliefs about the human reproductive process. Beliefs concerning conception vary widely, as do notions of the physiology of pregnancy and childbirth. Although many indigenous methods of pregnancy diagnosis (such as dream messages) have no equivalent in modern medicine, symptoms such as cessation of menses, nausea, fatigue, and breast changes are recognized in traditional cultures as early indicators of pregnancy.

Cultures that have not systematically studied internal human anatomy often have imprecise notions of where and how the fetus grows. In folk systems as geographically distant as Malaysia and Central America, the body is considered to be a tube in which all the parts, including the uterus, can move up or down or become displaced, and thus practices such as massage and the use of a binder around the abdomen are believed to be necessary to keep the uterus in place (Laderman 1982, p. 92, Cosminsky 1983, p. 146). In some instances the placenta is believed to be able to rise in the body tube, and even choke the mother if the cord is cut before the placenta is expelled (Cosminsky 1983, p. 146). In other indigenous systems of anatomy the fetus is said to attach itself to the woman's spine and is nourished either by sucking on a breast inside the womb or on the woman's intestine. In the process of labor and delivery the fetus is "torn" from the woman's spine creating a wound that later closes and heals (Browner 1985b, pp. 18 and 23). In parts of South India the fetus is believed to grow in a space occupied by food, wind (gas from gaseous foods), and sometimes urine, a belief that underlies a number of local dietary restrictions and lay medical practices. For example, pregnant women often avoid foods believed to be gaseous as they are believed to cramp the living space of the fetus, and make the baby roll in the stomach. In extreme cases this is thought to result in the umbilical cord getting wrapped around the fetus' neck (Nichter and Nichter 1983, p. 239). Maternal nutrition education messages that encourage an increase in food intake during pregnancy may be in
conflict with some of these folk notions of physiology. Likewise the modern practice of cutting the umbilical cord immediately after birth could be a powerful deterrent to giving birth at a formal care facility for women who believe they will choke if the cord is cut too early.

Beliefs concerning the duration of gestation are often imprecise within a culture. Sometimes the variability is ascribed to gender differences in the fetus, as in certain Liberian societies (Kargbo 1984). The Baule-Kode of Côte d’Ivoire say that female infants are born after nine months and male infants are born after ten months (Timyan 1974). A neighboring group, the Wan, believe that some infants, regardless of gender, are born after gestation periods of over 10 months, up to 12 and even 18 months. This is seen as an indication of a special destiny for that child (Ravenhill 1975). Although belief in gestation periods shorter or longer than the biological norm may have no direct medical implications, it is important to keep in mind local notions of gestation when developing prenatal care messages concerning the timing of vaccination and check-ups. The modern convention of dividing pregnancy into trimesters or into months when indicating correct prenatal care and diet often does not correspond to local cultural reality.

**Specific traditional maternal care practices**

All families and communities have ways in which they manage pregnancy and childbirth, centered around practices of the individual pregnant woman, her immediate family, and perhaps close neighbors or a traditional midwife. Except for a few cultures – for example in Sierra Leone, Indonesia, and Korea – where organized women’s groups traditionally serve an institutionalized community function, traditional cultures have little community-based management of pregnancy and childbirth. But the beliefs and the social structures that determine individual and household maternal care are community wide.

**Care during pregnancy** Traditionally most women do not seek regular check-ups during pregnancy as is the norm in modern prenatal care. In many traditional cultures women do not admit or talk about pregnancy until the physical signs are readily apparent, generally in the fifth or sixth month, for fear of attracting the attention of malevolent spirits or of tempting fate. In other cases it is considered embarrassing or a sign of poor upbringing to announce or exhibit a pregnancy before the last trimester. Such a delay in recognition of pregnancy has important implications for early prenatal care treatment because women may not be willing to participate until the fifth or sixth month of pregnancy. Also, women traditionally do not have the notion that pregnancy, to them a natural state, needs to be medically monitored, and the preventive aspects of modern prenatal care are not always well understood in cultures where most health care is of a curative nature.

Maternal care planners need to recognize, however, that notions of preventing pregnancy and
childbirth complications do exist for traditional maternal care and that these notions are essential foundations for developing appropriate messages to encourage the use of modern prenatal care. Traditional prenatal care often takes the form of patent or homemade medicines taken to ensure a safe and easy delivery, relieve the unpleasant symptoms of pregnancy, nourish the fetus, or improve the mother's health (Browner 1985b, Finerman 1982). Chemical analyses of traditional medicines in various regions have shown that most of these treatments are in fact beneficial or have no physiological effect. Some, however, have been found to be harmful. Deaths from acute renal failure associated with herbal medicine have been reported among pregnant women in Zambia (Lovenethal 1974), and cases of ruptured uterus have been attributed in Cameroon to the use of herbal preparations (Mbura et al. 1985, p. 541, Nasah and Drouin 1978). Useful information can be obtained in many countries from institutes that collect and analyze traditional medicinal substances.

In all cultures pregnant women are expected to follow rules about proper behavior and appropriate activity. Many of the behavior modifications expected during pregnancy have no harmful medical implications, but are culturally important. Social rules of modesty and the correct behavior of and with a pregnant woman are important to take into account when providing prenatal care services to traditional communities. There may be places pregnant women cannot go, and emotions they should avoid or actively pursue. Sexual activity is encouraged in some cultures during pregnancy and discouraged in others. In many traditional societies a pregnant woman is advised— as in modern societies— to refrain from heavy labor, especially during the latter part of pregnancy (Finerman 1982, p. 272, Browner 1985b, p. 21, Durnin 1980, pp. 86-94). Other societies consider it undesirable for a woman to rest excessively during the prenatal period, and pregnant women working in agriculture often do not reduce their normal levels of heavy physical labor (CARE 1987). Some Mexican communities believe that pregnant women should keep moving and working so that the baby will not become too big for easy delivery (Kay 1982, p. 12). High maternal energy expenditure in a situation of low dietary intake often results in low birthweight infants, which are generally easier to deliver. Advising against a restriction in activity has thus been a rational approach in societies with high levels of maternal mortality during childbirth and few options to cope with birth complications.

In many cultures pregnant women are advised to modify their diets, either by avoiding or eating specific foods or by restricting or increasing overall food intake. Planners need to understand the cultural explanation for the dietary prescriptions and taboos to develop appropriate nutrition education messages. Food taboos during pregnancy can lead to serious dietary deficiencies when the prohibited foods are principal sources of important nutrients.

The practice of restricting overall food consumption during pregnancy is widespread (Brems and Berg 1988). In many cultures this is considered to ensure an easier delivery, to the extent that
restricted food intake produces low birthweight babies, there is some truth in this belief. But a critical decrease in essential nutrients also poses a threat to the mother’s health (she can develop anemia, diabetes, or toxemia) and to a normal birth outcome for the infant (low birthweight, prematurity, or birth defects). In other cultures pregnant women restrict their overall food intake because of concerns over their own digestion, flatulence, and health (Berg 1973), or because of religious fasting practices such as the month-long Islamic Ramadan fast, which prohibits eating during the daylight hours.

These food beliefs are often complex and seemingly contradictory. An in-depth study of folk dietetics of pregnancy in South India showed that a majority of the women in the study areas expressed a preference for a relatively small baby (under 2.6 kilograms) as they felt such a baby would be healthier. A majority of the women also thought it advisable to eat less or the same amount of food during pregnancy as they ate before becoming pregnant. Surprisingly, more than 50 percent of the respondents associated eating less with having a large baby, since local notions of physiology hold that the fetus grows in the same space that is also occupied by food, gas, and urine. Thus eating less leaves more space for the baby to grow and move in ways necessary for its development. At birth, however, many mothers do not want a large baby because big babies are said to be "puffy" or "bloated" and thus unhealthy. A smaller baby is considered to be more likely to have a muscular (pushti) body associated with vitality and strength (dhatu), and a pushti baby is most desired (Nichter and Nichter 1983). In a situation such as this South Indian society, nutrition education messages aimed at improving maternal diets should capitalize on the belief that eating more produces the desired small, muscular baby.

Not all cultures restrict food intake during pregnancy. In Egypt, for example, a woman is traditionally encouraged to "eat for two." In rural Bengal also, as in other parts of India, there is an awareness that pregnant women need a greater quantity of nutritious food, and efforts are made to provide them with additional milk products, nuts, and other foods, even when cost is prohibitive (Dhillon and Yadav 1986, p. 78).

Measures to both prevent and control premature labor and hemorrhage are common in many traditional cultures, and include such things as wearing knotted strings around the waist, drinking special herbal teas, taking herbal sweat baths, or massaging the abdomen with special oils and pomades (Kargbo 1984). Pre-eclampsia and eclampsia symptoms such as tissue swelling and seizures are recognized as complications of pregnancy and therefore undesirable in some cultures, but are considered normal or even indicative of a good delivery outcome in others (Timyan 1987a, Kargbo 1984, p. 29). Modern prenatal care messages concerning such symptoms need to pay careful attention to local beliefs concerning their causes.
The fatigue and dizziness associated with anemia during pregnancy are recognized in many cultures as complications that can be treated. In certain parts of Nigeria, special black rings soaked in traditional medicine are worn by pregnant women who believe their dizziness is caused by insufficient blood (Elegbe et al. 1984). Treatment of anemia with iron supplements is resisted in many communities because of such perceived complications as the tablets weakening the blood or interfering with the digestive process of both the mother and the fetus. Indeed, certain types of iron supplements, particularly those based on ferrous sulphate, can cause constipation and discomfort. In some cases, liquid preparations are more acceptable than tablets or capsules (Nichter and Nichter 1983).

Certain diseases not yet recognized by modern medicine as causing complications during pregnancy are believed in certain traditional cultures to do so. Onchocerciasis is one of these diseases. Although intrauterine transmission of the disease has been suspected (Brieger et al. 1987), no evidence that it affects pregnancy outcome has been reported. In a Nigerian study, where 35 percent of 422 women examined had onchocerciasis, over half of the women believed that onchocerciasis affects menstruation, and 60 percent blamed it for infertility. Fifty-four percent believed the disease to affect the outcome of pregnancy, mentioning spontaneous abortion, fetal death, and production of too much "heat," with detrimental consequences. Perceived effects on the reproductive system such as these may eventually be demonstrated through research (Brieger et al. 1987).

Techniques for eliminating unwanted pregnancies exist in all cultures, although the ease with which a woman has access to an induced abortion and the safety of the procedures varies greatly, both across cultures and within a given culture, depending on age and socioeconomic conditions. Traditional techniques found throughout the world to induce abortion include the insertion of various objects into the uterus, curettage, typically with unsterile instruments, vaginal douches with herbal or chemical preparations, herbal teas, unripe fruit, or drugs such as quinine taken by mouth, herbal or chemical purgatives and enemas, and abdominal massage or beating of the stomach by various means (WGNRR 1988).

Some indigenous fertility-regulating methods include techniques many women commonly use to "bring down a late period" (Newman 1985). These include substances taken orally or vaginally. The Columbian folk pharmacopeia, for example, contains a large number of substances used to bring on late menstrual periods or induce early abortions. A study in Cali indicates that the difficulty in distinguishing between a late period and early pregnancy allows women some degree of "unsanctioned

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2 Curettage is the surgical scraping or cleaning of the uterus.
choice,* although voluntary abortion is illegal and socially unacceptable They recognize an intermediate stage when a "possible pregnancy" can be reversed, because it is too early to definitely confirm its existence. Cali women thus regulate their fertility during this early stage of pregnancy while avoiding guilt and social disapproval (Browner 1980 and 1985a)

Although some traditional abortion methods used during early pregnancy are relatively safe, and some traditional practitioners are skilled at performing safe abortions at later stages of pregnancy, the majority of traditionally performed abortions are unsafe. The complication and mortality rates are substantially higher for traditional abortions than for those performed according to modern medical techniques in sterile environments.

Developing countries vary greatly in the legal conditions under which abortion is allowed. Most Asian countries allow abortion under a broad range of conditions. In much of Central and South America and Africa abortion is completely illegal or officially permitted only to protect a woman's life or health. Even in those developing countries with few legal restrictions, however, conservative attitudes often combine with shortages of trained personnel to severely limit access to legal, safe abortion, resulting in a continued use of unsafe methods. In countries where restrictive laws are enforced, poor women have no option but to resort to traditional, often unsafe, methods if they decide to terminate unwanted pregnancies (Rosenfield et al. 1989).

Care during childbirth. The majority of community births take place in or near the home of the pregnant woman. Some occur in the home of the midwife, as in Bendel state in Nigeria (Akenzua et al. 1981). In other parts of Africa, traditional midwives have their own maternity centers to which the mother goes for labor and delivery (Cosminsky 1983, p. 150). Men are forbidden to be present in many cultures. In 31 of 64 cultures surveyed, men are not allowed to be present at childbirth (Ford 1964). In some cultures, however, the husband plays a major role, as in Yucatán, Mexico, where cases have been reported in which the husband's absence was blamed for the stillbirth of a child (Jordan 1980). Traditionally, among Caribbean Indians the practice of *couverade* requires the husband's behavior to parallel that of his wife. He may be obliged to retire to bed, go into seclusion, and observe certain taboos.

Whether a traditional midwife assists the home delivery depends on the nature of the birth as well as the culture. In some communities a normal, uncomplicated birth is managed entirely by the family or close friends, a specialist being called in only to help with complications (Finerman 1982, Jordan 1980, pp. 26-27). These specialists may be traditional healers, shamans, or traditional birth attendants. In many cultures, however, midwifery is a recognized profession and traditional midwives assist most deliveries, although the nature of their involvement and tasks vary. In most instances, the midwife is physically involved in easing the infant and placenta out of the birth canal.
In other communities the midwife only "catches" the infant, but plays a major ritual and emotional support role.

In northeast Brazil where women deliver in a vertical position, the midwives are called aparadeiras (literally, "one who catches babies"). The midwife typically does not handle or touch the woman in a delivery without complications, and often does not even look at the genital area. These midwives assist instead by relaxing the woman in labor (using such measures as combing her hair, talking with her, or saying prayers), catching and attending to the baby, and by coaching the woman to expel the placenta by vigorous sneezing (Galba 1984, p. 2).

In many traditional cultures some women deliver their babies unassisted. It may occur when labor is short and delivery sudden. This is most common among multiparous women. In other cultures, however, self-delivery is simply the preferred custom (Sargent 1989). In certain Malian cultures, women prefer to go through labor and even delivery by themselves, calling in another woman only to cut the umbilical cord (CARE 1987). In parts of Nepal self-delivery is preferred because women thereby avoid ritual debt, embarrassment, or both (LeVitt 1988, p. 157). Self-delivery is reported to be common among nomadic people.

Care during labor. The extent to which clearly defined stages of labor are recognized in traditional notions of childbirth varies widely, but some maternal care practices are common during early as opposed to active labor. Vaginal examinations performed by traditional midwives in some cultures are permitted during early stages of labor but not in the last, active stage (Bouchier 1983, Jordan 1980, p. 22). Manual vaginal dilation is sometimes performed during the latter part of pregnancy and the early stages of labor to help prevent possible obstruction as well as perineal tearing (Gelfand 1964).

In those cultures where prenatal vaginal examinations are performed, they are done in accord with local standards of modesty. The woman normally remains fully dressed, exposing only the area necessary for examination (Gallagher and Searle 1983). This is in sharp contrast to the amount of exposure typically required in a modern prenatal setting. Being sensitive to and allowing for traditional standards of modesty in modern care may require changes in hospital procedures, but it will undoubtedly increase acceptability and use of modern services by women from traditional communities.

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Inversion, a technique whereby the fetus is turned in utero, is used by some traditional midwives to avoid a breech delivery. Traditional midwives who are skilled in inversion perform it either during late pregnancy or during labor (Jordan 1984, 1980, p 21). Although there may be medical reasons to discourage this practice (it is potentially dangerous to both mother and infant if performed improperly), there are other practical considerations to take into account. If a community does not have immediate access to a hospital where cesarean section can be performed, inversion by a midwife skilled in the technique may be a viable option to a difficult birth.

Typically in traditional home births women in labor are not confined to bed, but rather encouraged to walk around or rest in whatever position is most comfortable, even during active labor. The practice of restricting movement during labor in many modern hospital settings often causes women to avoid hospitals for childbirth.

In some cultures, expression of pain is disapproved of and women are not supposed to cry out. In others, it is considered normal. In most societies family members or the traditional midwife take an active part in providing encouragement and support. In Yucatán, Mexico, for example:

When a woman needs encouragement to renew flagging strength, helpers respond. At the onset of a contraction, casual conversation stops and a chorus of helpers' voices pours out an insistent rhythmic stream of words whose intensity matches the strength and length of the contraction. [Sounds] come from all sides of the hammock. With the "head helper" behind her, not only holding her but physically matching every contraction, the laboring woman is surrounded by intense urging in the touch, sound and sight of those close to her (Jordan 1980, p 26).

Traditional attitudes regarding the management of labor range from laissez faire approaches to accelerating labor, depending both on the culture and on whether or not it is a first birth. The use of massage and herbal teas during labor is widespread and generally considered to be beneficial to the woman. Abdominal massage, often with an oil or herbal mixture, is performed to relax the woman during labor, to ease the pain of contractions, and to facilitate delivery. Massage may be gentle and soothing, as in parts of Malaysia (Laderman 1982, p 92). Or it may be more vigorous, as in the Punjab, India, where a particular type of manipulation known as "healing" has been reported in which the dai (midwife) exerts pressure and counteraction to each contraction with her feet on either side of the abdomen (Gideon 1962). The herbal teas taken during labor are commonly given to relax the woman and, perhaps less often, to speed up labor. Research has shown some herbal teas to be oxytocic (stimulating contractions), such as the Mexican herb cihuapatle or zoapatle (Montanoa tomentosa) (Ortiz de Montellano and Browner 1986, Ortiz de Montellano 1975). Although careful analysis is needed to distinguish those massage techniques and herbal teas that may be...
inappropriate during labor, any assistance that relaxes and reassures a tired, anxious woman should be encouraged and allowed to take place in a hospital setting.

Various techniques are used when labor is considered to be too long. Some involve the induction of gagging or the stimulation of muscle contractions. These include feeding the woman oil or a raw egg, putting her hair in her mouth, putting fingers down her throat, making her sneeze, and making her blow in a bottle. Before such practices are discouraged for home births, consideration should be made as to whether they exert a beneficial effect in certain situations (for instance, when contractions have slowed down). If such practices are traditionally considered important to birth outcomes, their limited use could possibly be permitted in modern maternity facilities. In some societies, women are urged to bear down from the onset of labor (or part way through labor, but nevertheless before the uterus is ready for expulsion of the fetus), sometimes leading to exhaustion, uterine inertia, or other serious complications (Jelliffe and Bennett 1962). Sometimes the vigorous shaking of the mother or other rough treatment is used as a last resort. Such practices should be strongly discouraged and replaced by more beneficial behavior.

A careful examination of traditional notions of complications in labor and delivery is essential for developing an effective decision-making models for referring home birth complications to health facilities. In most traditional cultures, prolonged labor is seen to be caused by events or forces external to the woman, which have to be discovered and identified before the woman can deliver. Modern notions that obstructed labor has physiological rather than supernatural or psychological causes clash strongly with these traditional beliefs, sometimes with fatal consequences. In many parts of West Africa, for example, a woman's prolonged labor is believed to indicate that she has had an extra marital relationship, and that until she confesses and names her lover she will not be able to deliver and no one will be able to assist her (Timyan 1974). It is therefore essential to clearly understand not only the traditional explanations for prolonged labor, but also to identify and educate those members of the family who have ultimate responsibility for the woman and decision-making power over her medical treatment - typically her father, brother, uncle, or husband - as they are often the only persons who can make the decision to seek medical help or to transport the woman to a medical center.

Care during delivery. Many birth attendants employ traditional techniques to make the vaginal passage more slippery and protect the perineum from tearing. In the Punjab in India, for example, daas (midwives) are reported to lubricate the vaginal canal with clarified butter or oil (Gideon 1962), while in parts of Malaysia the bidan (midwife) drips coconut oil into the vagina to make the passage more slippery. She also protects the perineum against tearing by pressing a wad of clean cloth against it as the baby's head crowns (Laderman 1982). In central Côte d'Ivoire, birth attendants first lubricate the birth canal with a crushed glutinous plant and then sit opposite the squatting woman.
to be able to push a cloth-wrapped big toe against the perineum as the baby's head crowns (Timyan 1987a) Episiotomy (surgical enlargement of the vulval orifice for obstetrical purposes) is not common in traditional home births, although trained traditional midwives have been reported to perform the procedure in some countries (Jelliffe and Bennett 1962)

The upright delivery position used in most traditional home births, such as kneeling, sitting, squatting, or standing is not only a matter of cultural preference, but may also be physiologically better than a horizontal delivery position. A survey of 76 non-Western societies revealed that 62 used a vertical position (Naroll et al 1961). The woman may use a chair or the edge of a bed for support or even a rope tied to a roof beam. Some cultures have traditional birthing chairs and stools. This contrasts sharply with modern maternity facilities that require a woman to deliver in a horizontal position with her knees pushed up and her legs in stirrups. A change in such hospital procedures would go a long way in making modern facilities more acceptable to traditional women. Unfortunately, many traditional birth attendant (TBA) training manuals also teach that women should deliver in a horizontal position. As there is no medical reason for requiring a supine position, especially for normal deliveries, the continued use of vertical positions in home births should be accepted and considered also for hospital deliveries.

In the majority of traditional cultures, the usual practice is to delay cutting the umbilical cord until after expulsion of the placenta. A survey of 64 non-Western cultures revealed that the cord is cut before the placenta is expelled in only very few cases (Ford 1964b). This practice is recognized in modern obstetrics to be beneficial, although doctors in hospitals in many parts of the world still cut the umbilical cord promptly after delivery of the infant. Some traditional birth attendants insert their hand into the birth canal to manually extract the placenta or push strongly on the mother's abdomen to force it out. Others use the techniques—such as induced gagging or muscle contraction—that are used in prolonged labor. Whereas some of these practices are to be discouraged because of the risk of hemorrhage, others may be benign, or even facilitate the expulsion of the placenta. In one area of Côte d'Ivoire, some use of gagging continues in home deliveries to aid in the expulsion of the placenta, but the practice has been modified on advice from the local maternal health program women use a clean finger to induce gagging rather than the long, unwashed stirring stick that formerly was pushed far down the throat (Timyan 1987a).

Beliefs concerning the placenta and the umbilical cord are often very strong and culturally important. The placenta is commonly believed to have a special relationship to the infant. In some cultures it is referred to as the second child, and it is believed that the child will die if the cord is cut before the placenta is expelled. In some cases, the disposal of the placenta is considered to have ritual importance; it may be buried together with the umbilical cord, sometimes having first been burned. In other cases the cord is saved and used in medicines. Modern maternity facilities that are
not sensitive to such local beliefs and practices and do not accommodate them unnecessarily violate important traditional beliefs.

In some cultures cutting the cord is delayed even beyond the expulsion of the placenta. Among the Newar in Nepal, for example, the cord is not cut until several days after delivery. The rationale for this practice apparently derives from the belief that prior to cutting the cord there is no pollution. Once the cord has been cut, however, the mother and newborn are considered polluted and untouchable. Restrictions are then placed on activity, diet, and contact with others until the purification ceremony is held 3 to 12 days after the delivery (Levitt 1988, pp 155-156).

Tools traditionally used to cut the umbilical cord include bamboo, shells, razors, knives, sickles, broken glass, and other locally available materials. The cord is usually tied with string, thread, or plant fiber at a prescribed length from the child, which varies from culture to culture. In those cultures where it is very important that the cord be tied at a prescribed length, it would be easy to incorporate this into hospital births.

In communities with little or no exposure to modern notions of disease, cleanliness, and contamination are rarely taken into account in the choice of cutting tool and umbilical dressing, although some traditional methods are beneficial. In some cultures the umbilical stump is dressed with substances, such as mud or clay, ground shells, dried dung, ash, and soot, which are highly conducive to the transmission of tetanus. In parts of Africa and Latin America, however, the cord is cauterized with either a hot blade or candle flame and hot candle wax is applied, leaving the cord dry and sterile (Cosminsky 1983, p 154). Other cultures are known to use spider webs for dressing the cord. Most physicians view this practice as unhygienic and dangerous, but there is evidence that spiders' silk has antibiotic properties (WHO 1979a, p 26). Other dressings, such as palm oil, salt, talcum, local herbs, and locally made ointments are not necessarily as contaminating as dirt or animal dung. If they are culturally important, have little impact on the infant, and their use is difficult to eradicate, it may be more effective to modify the practice rather than try to eradicate it.

Postpartum care In many cultures women receive more attention and better care postpartum than during pregnancy. This is especially so with the first pregnancy and often so when the infant is a son. Because of the emphasis culturally placed on postpartum care, health care personnel should understand the rationale underlying this emphasis and build upon it to educate community members about the value of prenatal care. Immediate postpartum care often concentrates on the mother rather than the newborn. In certain Philippine communities, for example, it is felt that the mother merits the immediate attention of the midwife because of the threat of buhí-buhí, postpartum hemorrhage. The infant's umbilical cord is cut only when the mother is judged to be out of danger (Hart 1965, p 57). In other cultures both mother and newborn receive equal amounts of immediate attention.
In cultures where the mother is attended first, education for home births should include advice on placing the infant away from drafts, preferably wrapped in a clean cloth.

Alcohol, salt, and various herbs are often used to treat wounds of the birth canal. Careful evaluation is needed of these substances' benefits and hazards before their use is discouraged. Massage of the abdominal area to ease afterbirth pains and promote retroflexion (contraction) of the uterus is very common. Breasts are often massaged to stimulate milk and special herbs or mixtures taken to increase milk flow. Herbal teas are commonly administered as remedies for postpartum pains. Herbs such as ergot are sometimes used to stimulate uterine contractions.

Heat is often applied, particularly in cultures that consider women to be in a "cold" state following childbirth. In parts of Guatemala and Mexico a sweat bath is used (Cosminsky 1983, p. 155). In other areas hot herbal baths are given. In Southeast Asia the practice of "mother-roasting" or "lying by the fire" is common. Use of an abdominal binder after delivery is also a common practice. Mayan Indian communities of Central America use binders to "keep the uterus in place" and to "close the bones" that have opened during delivery (Cosminsky 1983, p. 155).

Whereas the extent to which a woman is traditionally expected to reduce her workload before childbirth varies considerably from culture to culture, it is common throughout the world to find restrictions placed on physical activity after childbirth. There are often specific prescriptions for rest and avoidance of normal household tasks during the immediate postpartum period. In addition, much of the proscribed behavior for this period has the effect of restricting the mother's activity. In many cultures, postpartum women are told to avoid interaction with other people, sexual intercourse, the cold and winds of the outdoors, and any contact with water. Often women are expected to remain in their homes during the postpartum period, although the duration of the period is culture specific. In China and Vietnam, a woman is traditionally not supposed to leave her home until one month after delivery (Mathews and Manderson 1981, p. 9, Pilisbury 1978b). While this period of confinement is shortened in many households, the notion of confinement is typically still honored. In cultures where the postpartum period is formally observed there is a fixed number of days of restricted activity, most commonly a period of between 8 and 40 days, generally followed by a ceremony or ritual marking the end of the period. Local rules concerning postpartum restriction are important to know for postpartum care in a formal health facility. It may be more culturally appropriate for the postpartum recovery ward to be secluded from the rest of the facility.

Encouragement of complete or even partial postpartum rest often coincides with the belief that rest is important for establishing lactation, a belief supported by scientific evidence. An extensive study in Honduras found that working women who stopped breastfeeding early typically had taken as little as one or two weeks off work. These women reported having more help in the first weeks.
after giving birth but less at later times. In contrast, successful prolonged breastfeeders more often took 20 to 40 days off to rest, care for their infants, and establish lactation. They generally cultivated sustained support systems for child care and other assistance in their households (O'Gara 1988, pp 6-7).

There is virtually always a difference in food modification practices between pregnancy and the postpartum period, and often there appear to be more dietary taboos and prescriptions during the postpartum period than during pregnancy itself. It also appears that these rules are followed more strictly after childbirth than during pregnancy. In Liberia, for example, where pregnancy generally does not entitle a woman to more or better food or a lightened workload, once the living offspring has been produced, the woman is rewarded with more animal-derived food products and a much-reduced workload for approximately 40 days (Jackson and Jackson 1987). Attempts by maternal nutrition programs to improve the nutritional status of pregnant women might be more successful if they adapted elements of the traditional rationale for an enriched postpartum diet to a pregnancy diet.

The custom of providing extra nutritious foods during the period directly following birth sometimes extends well into breastfeeding. The emphasis often changes from foods to "fatten" and assist the mother in regaining her strength to foods believed to increase good milk supply and thus nourish the baby. A study of dietary practices and taboos during pregnancy and lactation in Sudan, for example, showed that only 33 percent of the women interviewed felt that special attention should be given to diet during pregnancy, while 44 percent believed diet should be altered during lactation, and nearly 93 percent during the immediate postpartum period. In general, women seemed more aware of the importance of increasing food intake and the need for special foods during breastfeeding than during pregnancy (Osman 1985).

In some societies lactating mothers avoid certain foods because they believe that a child may acquire, through the mother's breastmilk, the negative characteristics of the animals from which they come. In many parts of Oceania, for example, crocodile and fish are avoided on the grounds that they may transmit ringworm, leaving scales that resemble those of the crocodile or fish (Conton 1985, p 48). In rural Bengal, India, consumption of green leafy vegetables is discouraged for fear of diarrhea, and some women reduce intake of water and other liquids because liquids are believed to make the belly flabby. If either the child or mother develops diarrhea, breastfeeding halts until it subsides. The child is given a special diet and the mother reduces her intake or fasts (Dhillon and Yadav 1986, p 79). Both of these practices are detrimental to the baby's and mother's health. A baby with diarrhea should always continue breastfeeding for appropriate nutrition, rehydration, and added comfort. In the Kathmandu valley of Nepal, mothers do not include leafy vegetables, fruit, or soybean in their diet until two months postpartum, as they believe these foods cause gastro-
Dietary practices such as these should be carefully evaluated for their effects on the overall nutrient intake of the mothers and on the infant's nutrition, and culturally acceptable modifications proposed where necessary.

**Lactation** Folk beliefs concerning human physiology have an impact on lactation. In Mali, the Bambara believe that human milk is produced from a mother's blood, and that a woman has only a finite amount of blood for her lifetime. The quantity of milk, therefore, cannot be affected through modification of diet or physical routine. If a woman loses blood in an accident her milk supply will be reduced, and she may have to begin artificial feeding. Older women who have breastfed many children may have poor milk supplies because they have "used up" all their blood (Dettwyler 1987, p 638 in Brownlee 1989).

Breastfeeding right after birth and during the first few days of an infant's life is discouraged or prohibited in many cultures because of beliefs concerning colostrum, the yellowish substance produced in the breasts before the milk comes in. The discarding of colostrum is regrettable because this substance has a high concentration of immunization factors that the baby needs, as its own immune system is not fully developed at birth. Colostrum is also essential for premature babies, as this substance is tailored to the baby's nutritional needs and stage of development. A study of ethnographic data on breastfeeding in 81 societies found delayed nursing for 24 hours or longer was common in 52 percent (Lozoff 1983). Many surveys have indicated that a large percentage of mothers delay breastfeeding because of negative beliefs concerning colostrum— that it is "dirty," or "yellow and therefore not real milk," and thus not fit for the baby to consume (Hoodfar 1986, Mantra et al 1985, Dattal et al 1984, Devi and Behara 1980). In Papua New Guinea, women believe that colostrum is the milk that remains when the mother weans her previous child and resumes sexual relations. "All women agree that semen entering the milk turns it yellow or black and such milk will sicken a nursing child" (Conton 1985, p 44). Breastfeeding immediately after birth is also important for the mother as it stimulates uterine contractions and thus reduces risks of hemorrhage. Modern maternal care programs that seek to encourage early breastfeeding should carefully examine traditional attitudes towards colostrum before adapting health education messages.

Once breastfeeding is established, many cultures believe in specific treatments, medicines, and foods that are considered to stimulate milk production. In Amanolco, Mexico, the lactating mother takes one or two sweat baths soon after delivery to promote recovery from childbirth and then continues sweat baths regularly to promote successful breastfeeding. According to traditional beliefs, breastmilk has qualities that are animalistic, contaminating, and possibly perverting to infants. Sweat baths transform breastmilk into what women term a coquito (cooked) food ideal for infants. Sweat baths focus on the needs of the lactating woman as well, providing a period at regular intervals when a woman can rest and consult with other women about her own and her infant's health (Millard and
This practice may in fact be beneficial, as it probably relaxes the mother, thereby facilitating the let-down reflex that stimulates milk production and flow. Sweat baths also may prevent the milk ducts from becoming blocked, thereby preventing mastitis (breast infection).

Lactating Sudanese women share the usual family meals but are given extra foods, all high in protein and calories, to promote a good milk supply (Osman 1985, pp 90-92) A sample of urban and rural housewives in Egypt also suggested that breastfeeding women should be given foods believed to increase milk production, such as green leafy vegetables, protein-rich foods, and high energy foods with special hot drinks (Mikhail 1982, p 36) Breastfeeding mothers in rural Bengal, India, are sometimes given three "full" meals (as opposed to two for other members of the family) and a little more dal (lentils, an important high-protein staple) and other vegetables (Dhillon and Yadav 1986, p 79)

In many traditional cultures, breastfeeding is believed to be a sure form of birth control, but although prolonged, intensive breastfeeding does on average result in extending postpartum amenorrhea, ethnographic and medical data indicate that the relationship between breastfeeding and anovulation is not perfect (McClain 1982, p 33) Practices such as exclusive breastfeeding (that is, nursing without providing any other supplements), feeding on demand, and night feeding have been shown to increase suckling and thus prolong lactational amenorrhea Many cultures, especially those in Africa, require postpartum sexual abstinence of the woman and often link the practice with breastfeeding The belief supporting this linkage is that sexual relations contaminate the milk supply and cause the infant, and sometimes also the mother, to become ill

Integration of traditional practices into formal care

Attempts to make modern maternal care more acceptable to women from traditional cultures will succeed if traditional beliefs and practices are considered and allowed for in both home-based and hospital-based care Deciding when and where to accommodate traditional practices involves an evaluation procedure that encompasses both medical criteria and cultural criteria The factors involved in these decisions and the available options are discussed in the following section
The process suggested for selecting the traditional care practices to be integrated into the modern maternal care system involves three stages: investigation, evaluation, and action.

**INVESTIGATION**
- Identify maternal care practices
- Understand underlying beliefs

**EVALUATION**
- Determine medical implications
- Determine cultural importance

**ACTION**
- Discourage
- Ignore
- Promote in home-based care
- Integrate into formal maternal care system

*Investigating maternal care practices and beliefs*

If literature documenting local practices exists, this should be investigated first, not only for specific data but also for suggestions for what to expect when doing additional field research. The sampling of existing knowledge concerning maternal care presented in the previous section should provide a framework for pursuing further investigation. Documented practices from neighboring cultures can also suggest avenues of research. It is important to keep in mind the difference.

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4 Six major surveys of the anthropological literature on childbirth have been produced. Three are early classics Montagu (1949). More recent works include Mead and Newton (1967), Oakley (1977), and Kay (1982). An annotated bibliography of the literature on traditional practices related to pregnancy and delivery care has recently been prepared by WHO (Edouard and Foo-Gregory 1985)
between ideal and real behavior when reading the existing literature on traditional maternal care practices. Not all studies avoid the pitfall of equating beliefs or statements about ideal behavior with actual practices. Survey data can also be misleading in identifying actual practices because they often represent short-term investigations that rely primarily on asking questions rather than observing behavior. In addition, one-time surveys may capture a sample of habits (for example, dietary intake or activity patterns) at only one season of the year, thus giving a false impression of the total picture.

Because local maternal care practices and beliefs must be identified before evaluation and action can take place, it is often up to the health program personnel to carry out the investigation to acquire the missing information, taking into consideration the following essential distinctions made in doing behavioral research, as well as suggestions for investigative techniques.

**Observed versus reported behavior** Although practices and beliefs are to be distinguished, they are very intertwined and data on one is often collected at the same time as data on the other. Gathering information on traditional practices can be done in two ways by asking questions or by observation. Ideally it is best to do both. In the first instance the resulting data is reported behavior, and in the second it is observed behavior. Both types of information are essential because there is always a difference between "ideal" behavior and "real" behavior. Reported practices are typically couched in terms of generally accepted behavior, or what should happen, during pregnancy, childbirth, and the postpartum period. Other times the reported behavior represents what is most commonly done, or the cultural norm, in a given situation, as in "After delivery the mother stays in her hut with the newborn baby for one week." Sometimes it is given in terms of prescriptions and proscriptions (taboos) about what the pregnant woman and those around her should and should not do, as in "A pregnant woman should never eat wild game." In all these cases, what is expressed is the culturally-defined ideal behavior, a belief about what should be done, not necessarily what is actually done.

In reality, many people depart to some degree from the ideal. This is the real behavior. For instance, in those societies which cite as ideal behavior a week-long postpartum seclusion most women may indeed stay inside their huts for a week following the birth of their first child, but with subsequent births may remain there for only a few days. A very poor woman may never be able to afford a week off from work and chores while a wealthier woman may follow this cultural rule after each birth. Likewise, not all women actually comply with dietary taboos during pregnancy and postpartum.

Whereas real behavior may be reported at the same time, and in contrast to, the expected ideal, it is often only through observation that the distinction between ideal and real is made. For those
involved in health delivery or nutrition and health education it is crucial to understand both the ideal and the real. By first understanding the ideal, as a baseline, it often becomes possible to see where deviations occur and to use these as entry points for promoting changes to improve pregnancy outcomes.

**Questioning techniques** Information concerning maternal care behavior can be obtained by interviewing *key informants*. These are people (typically women) who are known to possess substantial knowledge concerning traditional practices and are willing to discuss them. An extended interview can provide an overview of the situation and help in discovering unexpected aspects of maternal care. The use of questionnaires is another technique for obtaining reported behavior. They are typically administered to large numbers of women in order to determine the range of variation of a specific practice and the extent to which a certain practice is used.

The *focus group* technique involves a discussion of a specific topic with a group of people usually of the same sex and belonging to the same peer group. A facilitator, who uses a discussion guide, loosely directs the discussion. This technique is suited to getting information on maternal care practices because there may be topics that women or men will discuss more readily in the presence of peers than in individual interviews. The facilitator should keep in mind that the rules for speaking in public are culture specific, and that there may be local social and political factors that have an influence on what people will say in a group situation. Further information on interview, survey, and focus group techniques can be found in Bernard 1988, Fowler 1984, and Krueger 1988.

**Observation techniques** Researchers have many techniques for observing behavior. In using these techniques it is important to take into account the larger social context and cultural meaning of the behavior being observed. *Participant observation* is a strategy favored by anthropologists for gathering many kinds of data on a community at one time. It typically involves a researcher who has at least a working knowledge of the local language and rules of etiquette, who is well enough integrated into community life that his or her presence there does not overly effect what people do and who remains in the community long enough to observe events as they occur naturally over time. Quantitative or qualitative data can be gathered. As the researcher becomes less and less of a curiosity in a community, she or he can administer questionnaires, watch and record events that are usually closed to outsiders, or walk around with a stopwatch, clipboard, tape recorder, or camera. An important component to participant observation is removing oneself periodically from cultural immersion to intellectualize what has been observed and experienced, to put it into perspective and write about it convincingly. Participant observation provides an opportunity not only to observe,

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5 See Timyan 1987b for a discussion of the potential limitations of focus group discussions in cultures with an oral rather than written tradition.
dissect, analyze, and count behavior, it also offers an intuitive understanding of the meaning of the behavior, of why it is valid to make statements of cultural fact

Participant observation is typically associated with holistic studies of an entire culture, but the strategy can also be used effectively to investigate just one element, such as maternal care practices. A researcher well-integrated into the community can focus her or his observations on pregnant and lactating women and perhaps even arrange to be present at births.

Another observation technique, which cannot be used in observing the more private moments of pregnancy and childbirth but which is useful for collecting large numbers of observations of specific activities, is the random spot observation method. With this method a researcher stops by randomly selected households or work sites at randomly selected times over a given period -- from 3 to 12 months or longer depending on sample size and the nature of the research question -- and records what targeted members of the household are doing at the first moment of the visit. Once he or she has recorded that activity, the researcher proceeds to the next observation site. Thus, random spot observation can generate a very large number of random observations amenable to both statistical and ethnographic interpretation. The behavioral measurement obtained is expressed as the proportion of all observations in which the behavior of interest occurs. Average duration of activity (not directly observed) is determined through statistical analysis, based on the proportional frequency of the activity expressed in some unit of time.

This method would be appropriate for investigating such behaviors as intrahousehold food allocation and consumption, the activity patterns of pregnant and lactating women, or the relatively public maternal care activities of women. While this method is slightly more intrusive than participant observation, with tact and time the researcher’s behavior can be taken for granted and become accepted in the community.

Understanding the rationale behind the practice. It is important not only to identify maternal care practices, but also to be aware of the beliefs associated with the practices. This information is essential for the evaluation of the cultural importance of the practice. Behavior that seems illogical or without reason to outsiders almost always has a rational basis in the culture practicing it, even though many members of the society may not be aware of it and may only do it out of tradition or habit. Most community members can cite reasons for the prescribed and proscribed behaviors. There may be different rationales given for the same practice depending on the person explaining.

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6 For a more complete discussion of participant observation and validity in qualitative research see Bernard 1988 and Kirk and Miller 1986
the behavior or on the context of the discussion. At one time, a superficial explanation may be given such as "we do it because it is the custom" or "because our grandmothers always did it." At the same time, more sophisticated or insightful members of the same community may articulate a deeper-level reason for the same practice. For instance, in one central Côte d'Ivoire community, the usual explanation for a taboo on eating antelope is "We Gblengbien have never eaten antelope." An elder from that clan is likely to explain the same taboo with the story of his eighth ascending ancestor who was caught by a crocodile and dragged into its underwater cave and subsequently saved when an antelope walked over the mud structure and pierced a hole in it (Ravenhill 1973).

It is also important to understand whether a given maternal care practice is motivated chiefly by concern for the mother's health, the infant's health, or both. For example, in some Asian cultures, the rule that a woman during the postpartum period should avoid green, leafy vegetables is explained as a means of preventing diarrhea in her nursing child. Nutrition education messages must take such information into account in attempting to change behavior.

Because childbirth is seen in many cultures as a momentous occasion, practices associated with it often have important ritual significance that is directly linked in the minds of community members to the future well-being of the entire family and community. Such behavior often has to do with keeping the gods or ancestors acting favorably on behalf of the entire group. One major reason so many women from traditional cultures prefer to give birth at home is precisely because practices important to them can be followed at home. This is often difficult or impossible if they go to a health care facility for delivery.

**Evaluation of maternal care practices**

Once traditional maternal care practices have been identified and the rationale or beliefs that support them have been understood, program planners and health care providers need to evaluate the individual practices from medical and cultural points of view.

Evaluating traditional maternal care practices from the point of view of modern medicine involves deciding which are harmful, which are beneficial and which are benign to the health and nutrition of the mother and infant. Evaluation of the medical implications of a practice should be carried out according to modern notions of hygiene and disease, yet not be biased by modern procedures that are dictated more by convention than by scientific fact. A parallel evaluation is also needed of the cultural importance of the practice. If traditional beliefs supporting the practice are strong, if there are important rituals involved, or if there is a significant affective, psychological component to the practice, the practice is culturally important and chances are it will be difficult to change. The cultural evaluation provides an indication of when to expect resistance to the
modification of a medically harmful practice, and also suggests how important it would be to accommodate a given, medically benign, practice into modern care. Evaluation of the cultural importance of a practice is based on local cultural fact and is much more difficult to carry out than the medical evaluation. It is not always easy to determine how culturally important a practice is, one can rarely pose a direct question or consult a reference manual. But prior investigation into the beliefs that surround the practice and the rationale that backs it up will indicate its importance.

**Possible action to take regarding traditional maternal care practices**

Evaluation of a practice is the necessary prerequisite for making a decision concerning the appropriate action to take. Possible responses are (a) it should be preserved and/or encouraged, (b) it can be ignored, (c) it should be modified, or (d) it should be discouraged entirely in an attempt to eradicate it. Table 1 sets out the possible actions to take based on an evaluation of the medical and cultural significance of the practice.

A few practices can be identified that are unequivocally harmful and, whether or not they are culturally important, should be eliminated in all contexts, such as the use of animal dung as an umbilical dressing. Even in these cases, an understanding of the context of the practice can help program planners devise a culturally acceptable alternative.

In many instances however, the practice, if adjusted slightly, is medically benign or even beneficial. For instance, in central Côte d'Ivoire it is believed that a retained placenta can be detached by forcing a long stick down the mother's throat. Rather than try to eliminate the practice, a shorter, softer object is suggested as a substitute, since it was found that the induced gagging in fact promoted uterine contractions and thus sped up the expulsion of the placenta (Timyan 1987a). In rural Mali, cow dung and karite butter (a homemade cosmetic ointment) are traditionally used to dress the umbilical stump. Efforts to discourage the use of cow dung succeeded in a relatively short period of time, but the mothers insisted that karite butter had medicinal properties not understood by modern medicine. The health message was changed to allow for the use of karite butter, with the women taught to use the karite butter sparingly, to make it very pure, and to keep it in a sealed container.

Likewise, practices judged medically beneficial should definitely be allowed to continue in home-based care. They can also be incorporated or not into formal care depending on their cultural importance. For instance, the practice of using spider webs to dress the umbilical stump was discouraged for years until researchers discovered that the webs sometimes have antibiotic properties that promote healing (WHO 1979a). Encouraging such a practice might be effective in those communities where it is still culturally important. For families who have adopted more modern
<table>
<thead>
<tr>
<th>Medical Impact</th>
<th>Beneficial</th>
<th>Harmful</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Important</strong></td>
<td>Evaluation Practice is medically sound and culturally important</td>
<td>Evaluation Practice is hazardous or harmful to the health of the mother and/or infant, but has a significant cultural importance</td>
<td>Evaluation Practice has neither harmful nor beneficial medical implications, but is culturally important</td>
</tr>
<tr>
<td>Action</td>
<td>It should be promoted in home care and, if feasible, should be integrated into formal care</td>
<td>It should be discouraged, but a culturally acceptable alternative should be found</td>
<td>It should be promoted in home care and, if feasible, should be integrated into formal care</td>
</tr>
<tr>
<td><strong>Unimportant</strong></td>
<td>Evaluation Practice is medically beneficial, but has little cultural importance</td>
<td>Evaluation Practice is hazardous or harmful to the health of the mother and/or infant and does not seem to be culturally important</td>
<td>Evaluation Practice is medically neutral with very little cultural significance</td>
</tr>
<tr>
<td>Action</td>
<td>It can be accepted or, if ignored, practice may naturally give way to modernity more quickly than above category; it can also be deliberately discouraged for reasons of convenience</td>
<td>It should be discouraged</td>
<td>It can be accepted, ignored or deliberately discouraged</td>
</tr>
</tbody>
</table>
health care techniques, the practice will fall into disuse naturally.

Vertical birthing position is a prime example of a practice that should be allowed to continue. In many traditional societies, the preferred position for giving birth is an upright, or semi-upright position. Although this has been shown to be beneficial in most deliveries without complications, many modern health facilities still require a woman to be horizontal with her legs strapped into stirrups for delivery because this position is easier for the doctor. The cultural importance of a vertical birthing position differs from community to community and the "modern" method has been accepted in certain non-Western societies, but it is undoubtedly an important factor in the underutilization of maternity facilities for childbirth in others.

Action on traditional practice must be taken for two different contexts: home births and hospital births. The response may in fact be different for each context. Health personnel are obliged to take certain action in the case of home births because the practices are already in use and need to be modified or discouraged. In hospital births, however, where it is a question of integration or nonintegration of the practice, the easy (and most frequent) response is to ignore the practice. This is because the feasibility or convenience of incorporating it into the system and structure of a health care facility must be taken into account. For instance, it might be feasible to adapt a health education message to allow for the sterilizing of special ritual knives used in cutting the umbilical cord in home births. But it might not be convenient to allow each family to bring its own special knife for sterilization and use in a hospital birth. Individual decisions concerning appropriate action have to be made on a case by case basis, taking the relevant factors into account.

CONCLUSIONS

There are two components to the framework offered in this guide. The sampling of currently documented traditional maternal care practices and the three-stage process suggested for integrating traditional care into modern care – and vice versa. Each component assists program planners in making maternal care programs culturally appropriate and acceptable to local communities. The sampling of traditional practices and beliefs provides a background for asking the questions needed for the investigation stage of the process. This first stage is the foundation for the next two. Without an adequate investigation of local maternal care practices and beliefs, evaluation and appropriate action cannot take place. Because of the fundamental importance of the investigation stage, and because decisions taken at the evaluation and action stages are community-specific, the investigation stage has received much more attention in this guide than the other two. In the majority of cases, maternal health program planners can not rely on existing literature but must carry out the investigation themselves. Appendix B provides a list of questions to facilitate the investigation and should be used in conjunction with the discussion of maternal care practices and
beliefs presented in the second section of this guide

This guide can be used in a variety of situations. In community health education it is useful for providing the information needed for adapting maternal nutrition, prenatal, and delivery care messages to local realities. It can also be an effective tool for making training courses for traditional birth attendants and other village health workers more appropriate for their individual communities. Where formal health facilities serve communities that are more or less homogenous, this guide can be used to make specific maternal care services more attractive and appealing to local users. Health facilities located in urban centers, however, may not be able to take action on culture-specific practices and beliefs because the patients are from a wide variety of ethnic, religious, geographical, and socioeconomic origins. In such situations this guide can assist in identifying the components of maternal care service that need to be flexible in order to accommodate individual practices. The information in this guide is useful for improving existing maternal care programs whether facility-based or home-based. Ideally, however, the investigation and evaluation of traditional practices and beliefs should be carried out before a maternal care program is implemented. Policies and strategies for program design and implementation should allow time and other resources for this essential step.
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Appendix A  A Case Study in Culturally Inappropriate Maternal Care

The following excerpt from a study undertaken in Ecuador aptly illustrates how inappropriate hospital care can be for women from a traditional culture.

The Saraguro Indians in Ecuador employ optimizing techniques to select from several available health care resources. Ideational needs, rather than physical access, appear to impose the greatest influence on therapeutic choice. The influence of felt needs on health care is particularly apparent at birth and death. The community's new hospital provided free health care, but doctors failed to consider indigenous attitudes toward birth and death. The ideational cost of hospital care has made it an unacceptable alternative for residents. The following description of Saraguro cultural practices and beliefs offers an explanation.

Saraguro Quichua mothers are primary health caretakers within the family (Finerman 1982), controlling information in illness etiology which they base on humoral principles of hot and cold opposition (Logan 1977). Treatment combines dietary controls and the application of herbal remedies to restore humoral balance to the patient.

Quichua mothers participate in preventive care and treatment, acting as the first and most commonly consulted source for assistance during episodes of illness. In the 1980-1981 monthly health surveys it was determined that Saraguro mothers treated 92.8% of all illness episodes recorded, and they were the first consultant for 72.5% of these cases (Finerman 1982).

Saraguro women assume primary liability for their health and that of family members. Personal responsibility is also extended to care

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1 This lengthy citation is from Finerman 1984. References cited in her article are included in the reference section of this paper. Citations have been modified to conform to the style of this paper.
during pregnancy and parturition (Finerman 1982) Birth is seen as a period of danger for mother, infant, family and community. As a rite of passage, birth establishes a position for the newborn as heir, and creates or reinforces parental status for a women and her husband (Scrimshaw 1975) It is, however, a personal and life-threatening experience, and birth practices in Saraguro, as in other traditional populations, reflect efforts to preserve privacy and protect mother and offspring. Studies by Sargent (1989), Bauwens (1978), Scrimshaw (1975), Cosminsky (1983), MacCormack (1982), Romalis (1981), and others recognize the importance of birth as a private act with public significance.

In Saraguro childbirth most commonly takes place in the home of the puerperal mother. In interviews women expressed an overwhelming preference for delivery at home, to ensure privacy in childbirth. Quichua women also noted that familiar surroundings reduced physical and emotional tension and increased comfort during childbirth, a feature of home birth described in a number of other studies (Cosminsky 1977, Kay 1982, Romalis, 1981). Most deliveries in Saraguro are treated by mothers without assistance, or are attended only by husbands and female relatives. (Data from a health survey showed that) physicians and nurses attended in less than 10% of the births recorded and midwives assisted in approximately 25% of births surveyed, but husbands, female relatives and unattended deliveries accounted for fully 84% of the births recorded. Overall reliance on self-treatment or family assistance suggests substantial local concern for privacy and familiarity in health care (Finerman 1982).

Numerous treatments are employed in traditional home births. Vapor baths, teas, ointments and plasters are prepared for women to control pain and facilitate labor. Massage is also provided, and women generally deliver in the vertical squat position. Saraguro Indians regard the fetus as a functioning individual, capable of influencing a mother's health during pregnancy, and able to control the birth process itself. A difficult pregnancy or delivery is thought to be caused by the unborn fetus, thus every effort is made to ensure the comfort of the child during parturition. For example, sudden movement and noise are minimized to avoid "frightening" the infant.
Mothers avoid eating during labor so that the child will not be born with colic. It is thought that lack of food will increase the newborn's appetite and promote suckling.

After delivery the umbilical cord is cut and tied with cloth that may contain a mixture of medicinal plants. The cord is usually cut immediately after the child emerges through the birth canal, considered necessary to prevent the uterus from "reclaiming" the newborn. The child is then bathed and wrapped in several layers of clothing to protect it from cold air, thought to be malevolent and dangerous for vulnerable individuals. Mother and child then observe a 40-day postpartum recovery period. They are considered susceptible to illness and evil airs, so care is extended to protect them from chills. Bathing is permitted only on the fifth, twelfth and fortieth days after delivery in water containing herbs categorized as hot in the humoral system. Dietary restrictions also stress avoidance of foods thought to be cold, such as potatoes, rice, eggs and milk, and acidic foods such as lemon and orange juice, thought to "cut" or reduce lactation.

In contrast to home delivery, maternal hospitalization costs outweigh benefits for indigenous residents. Delivery at Saraguro's new hospital requires a public response to labor, violating Quichua concern for privacy. The expectant mother is removed from home and family and is attended by physicians and nurses. Patients must disrobe and wear a lightweight smock. In interviews women stated that this clothing left them exposed to the eyes of strangers as well as to malevolent airs, creating embarrassment, fear and physical discomfort from the cold. Family members are not admitted to the delivery room, and women noted that the supine position made delivery more difficult. Enemas and episiotomies also increased discomfort and women's sense of shame. Medicinal plants and massage were not permitted and most women expressed fear of anesthesia, stating that the unborn child would fail to "wake up" and emerge from the womb. Policies regulating diet, hygiene and a 2-day postpartum recovery period differ markedly from traditional birth practices. These differences in treatment levy substantial psychological costs, leading Quichua mothers to question the value of biomedical care in aiding and
protecting parturient women and newborns. Many noted that hospital delivery substantially reduces risk in childbirth, yet most remain unconvinced that hospital care can provide a more satisfying birth experience. The social, cultural and psychological cost of hospital care exceeds the apparent biological benefits for indigenous residents.

Hospital policies reflect more than differences in treatment. They also express disparate views of the birth process itself. Quichua beliefs emphasize the dangerous and sacred nature of birth as a rite of passage, requiring private, personal and familiar care. By contrast, physicians view parturition as a clinical and secular experience treated in a public, impersonal and unfamiliar manner. Saraguro view the fetus as an important influence on maternal health and childbirth. Physicians, by contrast, attribute the health of the fetus and the success of delivery to mothers by emphasizing the effects of hygiene, diet and drugs on pregnancy, birth complications and birth defects. By emphasizing maternal rather than fetal responsibility, doctors impose greater liability, and hence greater physical and psychic stress, on Quichua women. Thus traditional needs and values have been supplanted by health perspectives which produce a more painful and unsatisfying experience for patients.

The high psychological and ideational cost of maternity hospitalization, and failure to correct culturally incompatible policies, has led to community rejection of hospital services. After its first fourteen months in operation, Saraguro's clinic had delivered only five births, and only two of these deliveries were by Quichua women.
Appendix B  A List of Questions to Facilitate Investigation into Maternal Care Practices

<table>
<thead>
<tr>
<th>Area of Investigation</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pregnancy</strong></td>
<td></td>
</tr>
<tr>
<td>Detection and admission of pregnancy</td>
<td>What are the recognized signs of early pregnancy? At what point do pregnant women and their families readily speak of pregnancy and actively manage it? Are there taboos concerning what can be said about and done for a pregnant woman?</td>
</tr>
<tr>
<td>Behavior expected of a pregnant woman</td>
<td>Are there things a pregnant woman should not do? Places she should not go? Are there certain emotions which she should avoid, or actively pursue? Is sexual activity encouraged or discouraged during pregnancy? What parts of the body can be seen and touched by those tending to a pregnant woman?</td>
</tr>
<tr>
<td>Adjustments in work load</td>
<td>Is a pregnant woman expected to refrain from heavy physical labor? Or is restriction of physical labor considered to be unhealthy? Is there believed to be a connection between work and ease of birth?</td>
</tr>
<tr>
<td>Diet modification</td>
<td>What foods and liquids should a pregnant woman eat? What food and liquids should be avoided? Is it considered a good thing to increase overall intake? To decrease overall intake?</td>
</tr>
<tr>
<td>Home prevention of pregnancy complications</td>
<td>What preventive measures are taken to ensure an uncomplicated pregnancy (binder or string worn above uterus, amulets and rings, special teas, sweat baths, enemas)? At what stage of pregnancy are they begun? Who prescribes and administers them? Who uses them, and are they required for every pregnant woman?</td>
</tr>
</tbody>
</table>
Complications of pregnancy

What are considered potential complications? What are the symptoms? Are specific complications associated with early, middle and late pregnancy? Who is sought for advice and treatment? What are the usual treatments? Are there certain behaviors, symptoms or phenomena that happen only to pregnant women?

Induced abortion

What does a woman do when the pregnancy is unwanted? What are the current techniques used? (herbs, objects, medicines, etc.) Were there specialists in former times who knew how to safely induce abortion?

Labor and delivery

Management of labor

What does a woman do while in labor? Is she alone, or with others? What do others do around her? Is there anything special about the labor of primiparas?

Place of birth

Does a woman give birth in her own home or in someone else's (midwife, mother-in-law, other)? Is there a special place outside the home for birthing (animal shed, cleared spot outside the village, bath enclosure)? Is the environment specially prepared in any way?

Delivery

Who provides assistance, and what kind of assistance? Do some women (possibly multipara) prefer to deliver alone? What is done to facilitate delivery (lubrication or manual stretching of birth canal, helping woman to push, massage, etc.)? What position does the woman assume for delivery?
Delivery complications

Are there recognized stages of labor? At what point is labor considered to be too long, and are there considered to be complications? What are other signs of complications? What are usual procedures when there are complications? Who is called to assist? What does a woman who is delivering alone do in case of a complication? What are considered to be the reasons for delivery complications? How is a breech presentation handled? What is done for excessive bleeding?

Cord-cutting and handing of the placenta

Where is the child placed immediately after delivery? Is (s)he put to the breast immediately? When and how is the cord cut? How is the placenta handled? What happens if the placenta is not delivered immediately? Who is attended first, the mother or the child? Are there people attending both at the same time?

Childbirth rituals and ceremonies

Are there special rituals that other members (fathers, husbands, aunts, etc) perform while a woman is giving birth? Where and when do these take place? What is their purpose? Is there a special manner of disposing of the placenta? of the fallen umbilical cord?

Postpartum

Formal postpartum period

Is there a recognized postpartum period? Are different stages recognized and observed? What marks the end of the period?

Special care

Is a woman considered to have special needs during the postpartum period? Who tends to them? Is postpartum depression a recognized phenomenon? How are complications and pain managed? What are special treatments (baths, home medicines, teas)? What beliefs concerning the physiology of the mother and the child (colostrum, movement of the uterus, etc) influence the treatment?
<table>
<thead>
<tr>
<th>Special diet</th>
<th>What foods are prescribed and proscribed for the woman, and for what reasons? To what extent are these prescriptions and proscriptions adhered to? Does this vary with the sex and birth order of the child?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modification of activity</td>
<td>Are women encouraged to reduce their level of work? Are there activities in which they cannot engage? What, and for how long, are the restrictions on sexual activity? Are restrictions placed on the behavior of other family members? What is the rationale for restricting activity?</td>
</tr>
<tr>
<td>Lactation</td>
<td><strong>Physiology of lactation</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Diet and lactation</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Lactation and contraception</strong></td>
</tr>
</tbody>
</table>
Appendix C  References Listed by Geographical Focus

The following references have either been cited in this document or are recommended for further reading. The list is divided into sections based on the articles' geographical focus: the Middle East and North Africa, Asia and the Pacific, Sub-Saharan Africa, and Latin America and the Caribbean. These sections are preceded by a general section listing overview articles or articles pertaining to more than one geographical area.

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