A QUALITATIVE DESCRIPTION OF PERINATAL CARE PRACTICES IN MAKWANPUR DISTRICT, NEPAL

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Introduction

Perinatal mortality remains high throughout south Asia. Deaths in the perinatal period are intimately linked to the health of the mother and her newborn. Despite their public health importance interventions to address perinatal deaths have tended to focus upon managing complications and service provision. There is, however, a wealth of health-seeking behaviour literature documenting that access alone does not increase health service utilisation. A combination of socio-economic and cultural factors contribute to seeking and receiving health care (Hotchkiss 2001:44) (Devkota 1984:11) (Erickson 1995:11) (Justice 1983:96) (Reissland and Burghart 1989:17) (Thapa 1996:871). With the majority of births in south Asia taking place at home, it is here that illness is recognised as such, and here that preventative measures to avoid illness are practised. An appreciation of care practices and health-seeking behaviour for the population at risk is essential to define the thrust of health education, so that care providers respond appropriately when a problem arises.

Background

We are presently conducting a study on the impact of a community-based participatory intervention to improve essential newborn care (ENC). The study is a cluster randomised controlled trial involving 12 pairs of Village

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Development Committees (VDCs) in Makwanpur District, Nepal[1]. The study has three major areas of activity:

1. The intervention: this is a participatory intervention based on a model used in Bolivia (Howard-Grabman n.d:105). A VDC Facilitator is placed in each intervention VDC with a brief to work with women's groups in an action learning process to address problems in pregnancy and care of the newborn infant. The VDC Facilitator is a local woman who attempts to broker change in care practices. 12 VDCs will receive the intervention over three years. 12 matched VDCs will serve as controls during this period, after which they will receive the intervention in a form that will have been modified on the basis of the findings of the initial study.
2. Health service strengthening: this is carried out across the entire district in co-operation with His Majesty's Government of Nepal District health services. It comprises audit, training of personnel and supply of essential equipment and medications for care of the newborn infant. The health service strengthening team are also involved in the technical training of programme staff.
3. Surveillance: in the 24 study VDCs, a cohort of married women of reproductive age (15-49 years) have been enumerated and are followed prospectively every month, to identify pregnancies and determine the outcomes of births.

The aim of the overall programme is to bring about sustainable improvement in the care of mothers and their newborn infants, an improvement that should benefit morbidity and mortality. Improvements in care would ideally take place in the home, within the lay referral network and within the health service system. It is towards the first of these that the facilitation team is working.

Objectives

The first phase of the programme involved community entry and a period of qualitative data collection. To design an effective community intervention targeted at improving perinatal and neonatal outcome, current perinatal care practices, problems and health seeking behaviour need to be understood and located within the social context. Perinatal problems and health seeking behaviour have been documented elsewhere. This part of the study aims to

document the language used for perinatal health and current practices during normal pregnancy, birth and post-partum.

Table 1: Characteristics of study site

Characteristics	
Demographic	*(n)*
Number of VDCs	24
Population	169 776
Sex ratio*	103.7
Socio-economic	
Household primary occupation	*(%)*
Agriculture	86.35
Waged labour	6.96
Salaried/government	3.96
Small business	2.72
Household appliance score	*(%)*
0 = none of the appliances listed below	53.03
1 = wall clock and/or bicycle and/or iron	31.05
2 = hand tractor and/or sewing machine and/or cassette player and/or fan and/or radio and/or camera	7.21
3 = bus/truck and/or motorcycle and/or tv and/or motor tractor and/or fridge	8.71
Religion of household	*(%)*
Hindu	43.74
Buddhist	55.03
Muslim	0.02
Christian	1.13
Other	0.07

*number of male births per 100 female births

Methods

Setting: Makwanpur District occupies 2426 sq km and lies to the south of Kathmandu in the Central Region, Narayani Zone. It has a population of 395 889, the vast majority of whom are employed in agriculture. Topographically, Makwanpur includes both hill *(pahaad)* and plains *(terai)* areas. The district centre is Hetauda, an expanding town with good road connections and reasonably stable electricity and telephone provision. The level of adult literacy is about 44% (Nepal Research Associates 1999:338). The ethnic composition of the district is mixed: among at least 15 ethnic identities, the largest group are Tamang, a Tibeto-Burman, predominantly Buddhist group (46%), followed by Brahmin and Chhetri groups of Indo-Aryan origin (25%) (Table 2). A 24-bed District Hospital, four Primary Health Care Centres and 40 Health Posts or Sub-Health Posts serve the district. There are approximately 64 deliveries in the hospital per month and facilities for blood transfusion but not for caesarian section. 95% of deliveries in Makwanpur occur at home.

Table 2: Ethnicity of study site

Ethnic groups	Percentage
Tamang	56.52
Brahmin	12.73
Chhetri	10.19
Newar	3.77
Magar	5.71
Praja	1.89
Gharti	0.35
Majhi	0.83
Kami	3.28
Pariyar	0.86
Sarki	0.61
Sanyasi	0.24
Danuwar	1.40
Gurung	0.66
Thakuri	0.29
Other	0.69

Study Design: Focus group discussions were used to collect general information on perinatal terminology and care practices during the puerperium (Table 3). One supervisor facilitated and the other took notes. During the perinatal terminology focus groups, a technique called "freelisting" was used to initiate discussion. Informants are asked to list the names of things which compose a category, or domain of cultural knowledge (Fleisher and Harrington 1998:69). In our case, informants were asked to list the names of things they associate with pregnancy, birth and newborn care. After listing, cards showing pictures of different maternal and neonatal problems were discussed.

Table 3: Focus group discussions used in the study

Subject of Focus group Discussion	Objectives	Methodology
Perinatal language and terminology	To gather general information on the language used for perinatal health.	Focus group discussions with mothers using picture cards.
Normal perinatal care practices	To gather general information on current practices during normal pregnancy, birth and post-partum.	Focus group discussions with mothers using pictorial time lines

Care practice focus group discussions used pictorial time-lines as a tool to mark the stages of early pregnancy, later pregnancy, birth and post-partum. Facilitators drew the pictures themselves. A time-line was used to understand the sequential flow of perinatal events, as a 'prop' for facilitators and a focus of discussion for participants.

Site Selection: Two intervention VDCs were selected as study sites. The VDCs varied in topography and demography. At each study site focus groups were purposively sampled to include women of the five predominant ethnic groups and scheduled castes.

Permission to conduct the study was granted by each VDC chairperson and informed verbal consent was obtained from all participants. There were no refusals to participate in the study.

Data Collection: A total of 51 focus groups were carried out from May to June 2000. Of these focus groups, 24 discussions were about perinatal terminology and 27 about perinatal care practices. Team members collected data after a one-week period of extensive practical training. All activities were designed and supervised by the Principal Investigators and all methodologies were pre-tested in the office and in the field. Data were recorded both by note-taking and by tape-recording, for which permission was given in all cases. Each team member also maintained a diary in which she recorded her personal observations and informal conversations.

Data Analysis: Raw data were given specific reference codes. A random sample of raw data was translated into English by an independent third party. The data were broken into units for analysis and each unit was categorised. Patterns and processes which emerged from the data were sorted into themes.

The perinatal terminology data were used to develop a dictionary of terms for the VDC facilitators and interviewers working in the study sites. The findings were subsequently used to inform the design of the surveillance system and to refine the process of intervention in the larger randomised control trial.

Results

In our two study sites and across the ethnic groups, care practices during pregnancy, birth and after birth were surprisingly consistent. The following paragraphs present a summary of the information gathered.

Pregnancy

Being pregnant and having children contribute in large part to a woman's identity in rural Nepal. The importance of reproduction contributes ironically to a sense of pregnancy as normality, which permeates all activities in perinatal period – eating, working and preparing for birth.

Women in our study area are aware of the need to eat nutritious foods during pregnancy, yet a strong economic theme overrode this need. As one Tamang woman lamented: "rich people can eat fruit, but we can't. We can

only eat what comes from the fields". The availability of food is further complicated by intrahousehold allocation, cultural beliefs and practices during pregnancy, lactation and menstruation. Much is written about the "black box" of intrahousehold food distribution and the multiplicity of factors that guide the hierarchical distribution at meal times (Thapa, Chongsuvivatwong et al. 2000:421) (Gittelsohn and Thapa 1997:65). For pregnant women, food consumption is guided further by an interwoven set of beliefs and rules which include the way in which food can become polluted, food classification systems and local explanatory models of illness, as well as normative distribution patterns favouring certain household members. One of the food classifications common in our study was hot-cold. This classification appears to be particularly important during pregnancy and is intimately linked to pregnancy being considered as a "hot state", a common belief throughout south Asia (Goodburn, Rukhsana et al. 1995:54) (Nichter 1996:56). An increase in heat as pregnancy progresses is considered natural and aids birth, but excessive heat is dangerous. Miscarriage is commonly attributed to overheating in the body. White gourd and honey are foods which induce heating and if eaten are thought to cause harm, even spontaneous abortion[2].

Foods can also be classified according to their taste: sweet, salty, sour and spicy. Sour, bitter foods are craved by pregnant women. A woman who is seen eating lots of lemons is thought to be pregnant. Lemons are a cold food and so are suitable to eat during this time.

Yam, yam leaf shoots and allopathic medicine were all mentioned as being prohibited during pregnancy. Some pregnant women used the restriction of allopathic medicine as a reason not to visit the Health Post. However, there was a general consensus that if a health professional prescribed medicine it could be taken. Herbal preparations made at home or given by the Traditional Healer can be consumed. Vitamin supplements were not classified as medicine and their unpopularity was guided by different beliefs about the "strength" of foods. Some foods are considered as "strengthening" and some as "weakening." Vitamins are "strengthening" and will make the unborn child grow big and strong and result in a difficult birth[3].

The fear of prolonged or obstructed labour is common among women in Makwanpur. There exists a sense that working hard during pregnancy will result in a smaller baby and an easier birth (Panter-Brick 1989:217). However, the reality of the village situation clearly dictates working levels, as one Chhetri woman describes: "it is true that some women like to work hard so that their birth will be easy, but if there is no-one in the house you have to

do all the work yourself". It is interesting that the concept of "eating down" was absent here. Food availability is already curtailed by economics and cultural beliefs, and women in Makwanpur work hard and tie a cloth (*patuka*) tightly around their waists so that their babies will not grow large.

Women work until the first signs of labour begin, which accords with the normality of pregnancy (March 1994:10). They are shy about birth and fear that wider knowledge of their state would bring shame on their husbands' households (Bennett 1978:17). Polluting situations such as menstruation, pregnancy, birth and the postpartum period are associated with the most shame, and a woman's behaviour is socially regulated at these times. During pregnancy she should not travel very far; she should not step over the plough or the rope used to tie animals. Breaking these rules has serious consequences: for example, stepping over a plough will prolong labour. If a mother sees a dead body her child will be born with the umbilical cord around its neck. If she visits a place of worship during pregnancy the Gods will become angry and say: "I have already given you the baby, why are you coming again?", and her baby will be born disabled. A pregnant woman in the family also has implications for other household members: her husband must not kill any birds or animals, as he will have sinned.

Shyness and shame are further complicated by the fear of attracting evil spirits during the perinatal period. Women and newborn infants are particularly susceptible to certain kinds of spirits, spirits who are often the souls of childless women, women who died in childbirth or stillborn children. The souls become ghosts which taunt women and infants, particularly during the periods in which their own trauma arose (Manandhar 2000:25) (Blanchet 1984:59). For this reason, the Traditional Healer usually performs a ceremony to appease the souls of these women and children after their death. An expectant mother must also take care not to anger neighbours or relatives as they could become embittered and cast a spell, killing her unborn child.

Pregnancy, then, is characterised by vulnerability. Restrictions on food, behaviour and movement are all in place to protect the expectant mother's fragility. Shyness, shame and the "sense of normality" are intimately linked by a fear of blame. Problems during delivery and the puerperium are often explained in relation to events that occurred (or did not occur) during pregnancy. Likewise, many of the proscriptions during pregnancy are intended to ward off later untold events, leaving mothers in a situation where any perinatal complication could be linked to her transgression or non-

transgression of a social norm and hence her fear of blame (Goodburn, Rukhsana et al. 1995:76).

Birth

Preparation for birth is limited. Chickens, ghee, oil and spices may be bought and stored, to a degree that the household can afford. But economics alone does not prevent preparation: in an environment characterised by high infant mortality and the malevolence of ghosts and witches, superstition about preparing for birth prevails. As one Praja woman laments: "nothing is prepared as the baby might die." Nowadays the situation is changing. Women rarely use a sickle to cut the umbilical cord, they tend to buy a new blade instead. The use of the safe home delivery kit is, however, limited. When asked directly about a delivery kit, a Newar woman replied: "we heard about these things on the radio, but we haven't ever seen them." The supply and availability of safe home delivery kits continue to be a nationwide problem in Nepal (Levitt 1993:51) (Manandhar 1999:9).

Most women gave birth inside the house, although this did depend on the time of day. Tamang women spoke of giving birth inside if it is dark and outside if daylight. A Chhetri woman reiterated this: "sometimes we give birth in the maize field; it really depends on the situation". The place of birth tends to guide attendance. Those women who gave birth outside the house were invariably alone and consequently received a lower level of care. If births are attended, experienced, elder female relatives or close neighbours are most likely to be present. These women are the primary care providers for the mother. Pregnancy's "hot state" is observed during labour. If labour is long, delivery is induced with hot things, being near a fire, a warm oil massage and giving the mother hot drinks.

Traditional Birth Attendants (TBAs) are rarely called to attend births. It seems that in Makwanpur there is not a traditional role for a birth attendant. In other areas of Nepal a person is needed to cut the umbilical cord and this person is often a kind of TBA (Levitt 1993:75) (Manandhar 1999:11). However, in our study area, not one woman spoke of the need to call a specific person to cut the cord. Government trained TBAs are available in the community but tend to be called only in emergency situations.

After birth

A pregnant woman's vulnerability to harm increases as the postpartum period unfolds and is reflected in the choice of resting place. As an elder Magar

woman said: "the place is important, so she will not be touched and is protected from the wind." A postpartum mother (*sutkeri*) is usually kept in a corner, separated from the rest of the house by a semicircle of stones or a woven mat placed upright. Her seclusion is characterised by pollution and vulnerability. The mother is polluted and should not be touched by others, although the baby can be held. Sometimes she has to cook her own food and wash her own plates. Often she is not allowed to touch water. To protect the mother and her newborn baby from evil spirits, a sickle or fishing net can be placed by her side and the room should be filled with smoke. Although secluded, there was a strong consensus that the mother should not be left alone. She should remain secluded with her newborn until the naming and cleansing ceremony of *Nwaran*. This period of seclusion also functions as a rare opportunity for the mother to rest. When talking about the period after birth, many people recited the following proverb to us: "*birāmi uthera tangrinchha, sutkeri sutera tangrinchha.*" Which roughly translates as, a sick person will recover by getting up, but a postpartum mother (*sutkeri*) will recover by resting.

Table 4: Sequence of care after birth

Birth
⇓
Placenta expelled
⇓
Umbilical cord cut
⇓
Baby washed
⇓
Baby given oil massage
⇓
Baby wrapped
⇓
Breast cleaned
⇓
Baby breastfed

The sequence of care for a newborn baby is shown in Table 4. The umbilical cord is only cut after the placenta has been expelled; some mothers

cut the cord only after the baby has cried. The cord is tied and sometimes "milked," before cutting with a boiled or unboiled blade, a knife or sickle. The cord can be wrapped around a piece of wood or rested on a coin to aid cutting. Mustard or fenugreek oil is usually applied to the umbilical stump. Turmeric mixed with oil is only applied if there is excessive bleeding or pus. After the cord has been cut the period of no-touching begins (Blanchet 1984:87) (Levitt 1993:82).

The placenta is often referred to as the newborn infant's friend (*saati)* and should be treated accordingly (Karlsson 1998:22) (Manandhar 1999:31) (Manandhar 2000:43). It should be wrapped in a leaf plate, plastic bag or placed in an old broken clay pot and buried: the level of respect differs from place to place. A small number of Newar women described an intricate ceremony in which the mother-in-law or sister-in-law take the placenta, some incense and small lamps to a special place with a big stone. In contradiction, some Magar women spoke of just throwing the placenta into the river. There were a number of reasons given for burying the placenta. The most obvious being that it is dirty and animals must not eat it. More potent is the influence the placenta has over the newborn infant's health and future. If ants eat the placenta or if mud touches its surface the baby will become sick. When buried, if the cord stump is not standing upright away from the placenta the baby will cry and cry. If the placenta is buried far from the house, the child will stay away in later life or another baby will not be conceived for a long time.

A little taste of honey, ghee, oil or sugar is often given to the baby before the first breastfeed. There were a number of reasons for this practice. A baby's words or life will be sweet, or the first taste of breastmilk will be sweet. Others gave more practical reasons, such as the need to keep the baby's mouth wet, an aid to suckling and a means of dislodging dirt or mucus in the baby's throat.

Colostrum is in general fed to babies. The first milk expressed from the breast is considered dirty, so a little is squeezed out before every feed. As a Damai women said: "even if we are working in the fields, we must keep a sickle with us and throw a little milk away before feeding". There are other reasons for expressing a little milk before each feed, apart from it being dirty. A Brahmin woman told us that this "unusable" milk, if not thrown away, would make the breast become hard. Others said that feeding this milk would make the baby sick. The practice of discarding the first milk of every feed appears to be common throughout Nepal (Manandhar 1999:27).

Just as pregnancy and birth are characterised as a "hot state", after birth the mother and newborn infant become cold and efforts must be made to keep them warm[4]. The mother wears a headscarf and is given "warming" foods such as caraway (*jwāno*) soup. "Cold" foods such as black dhal must be avoided as they will cause sickness.

Table 5: Description of ceremonies performed for the infant

Ceremony	Description
Naming and cleansing ceremony (*nwaran)*	This ceremony is performed between three and eleven days after birth. Sometimes it is performed more than once. The ceremony for a daughter is often earlier than for a son. The house is cleaned or replastered with cow dung and mud. Cow's urine is sprinkled around the house. Usually, a priest blesses the baby, gives a name and a birth certificate (*chino).* The name is not spoken to others. Holy string may be tied around the baby's waist and wrist: "if we do such things no-one will be greedy [jealous] of the baby". Light is important so that the infant's future may be bright: 'the baby can be shown to the sun"'[5]. Usually, after this ceremony the mother's domestic work begins and the no-touching rule disappears.
Rice feeding ceremony (*pasni*)	Usually at five months for a daughter and six months for a son. Egg, fish and meat are brought and rice is cooked. The child is fed with a coin or by hand and should taste a little of all of the food that has been prepared. Relatives and those who were present at the birth are invited and bring gifts.

The *Nwaran* ceremony is performed between three and eleven days after birth (Table 5). The day on which the ceremony is held varies according to ethnic group, clan and geographical location. There seems to be a modern trend of preferring a ceremony as soon after birth as possible. Housework usually then begins for the mother, but agricultural work is delayed until approximately a month later. Mothers are encouraged to take their babies to their maternal houses (*māiti*) for an extended period of recuperation. Starting

domestic and agricultural work and visits to her *maiti* are all determined by the nature and size of the household. As a Tamang lady said: "if there is help in your own house you can stay at your *maiti* for one to two months".

Discussion and Conclusions

Although normal practices have been shown to be similar, we must not assume that beliefs, which guide practice, are the same for all ethnic groups. Differences in practice are often only revealed during crisis, when something other than the norm occurs. Other reports describe a degree of variation in degrees of female autonomy across ethnicity, variation in shyness and shame, variation in interpretation of what constitutes a "problem", and variation in beliefs which uphold decisions (UNICEF 1998:35) (Manandhar 2000:13).

We have shown that the normality of pregnancy influences eating and working habits in rural Makwanpur. Yet there are common fears which influence behaviour. A fear of spirits and witches results in a number of social restrictions. A fear of prolonged labour and big babies upholds working levels and vitamin supplements are discarded. Fear is also intimately linked to shame, shyness and blame, and in turn to a woman's position within the household.

We were often surprised by mothers' awareness of the need to eat more, work less during pregnancy and prepare for birth. But their knowledge often did not result in practice. The ability (or lack of it) to practise is upheld by different structures of society, hierarchy and social norms. A pregnant woman who ate more and worked less would attract attention to herself and contradict the pervasive sense of "normality" which characterises pregnancy. Perhaps messages about care during pregnancy need to be directed at a different audience – those with the authority to change awareness into practice.

Care after birth is governed by themes of seclusion, pollution and vulnerability. Restrictions on movement and an emphasis on rest mean that a postpartum mother enjoys a rare period of recuperation. Breastfeeding practices were exemplary: only a taste of prelacteal, feeding colostrum, early and exclusive breastfeeding (Pradhan HB 1999:20) (UNICEF Nepal 1997:10) (Nepal Nutrition Intervention Project Sarlahi 1999:33) (Paneru 1981:43). However, neonatal mortality remains high in rural Nepal and warrants a closer examination of care practices. Pollution and cleanliness is an area that needs more focus. Cord cutting practices - a clean blade or a boiled blade? Washing hands before cutting? A clean delivery place or just a corner with some straw?

Sundried cloths or old rags? Yet a newborn baby should be bathed and can be touched. Is the pollution associated more with the mother than the baby? Unfortunately, bathing the infant, although hygienic, increases the chance of the baby becoming cold, especially during the winter in a mountainous climate. There already exists a strong need to keep the mother and baby warm. This need for warmth should be emphasised from the moment the baby is born. This leads to another area of observation. In this paper we have not explored what happens if the placenta is not expelled immediately after birth, a situation which is common in multiparous women. In this situation, what happens to the sequence of care? Is the newborn left unwrapped and the cord uncut? Considering the reverence shown towards the placenta, the focus may be on getting the placenta out rather than wrapping the baby. However, we did not explore practices during times of emergency, and this is an area which could reveal much more about behaviour. Due to the vulnerable nature of the postpartum period, it is an almost exclusively female domain. The primary care providers tend to be close female relatives (UNICEF 1996:77), and it might be that interventions should focus on women and elder female relatives.

Notes

1 Permission to conduct the randomised control trial was provided by His Majesty's Government of Nepal: Ministry of Health, District Development Committee and District Health services and the Nepal Research Council.

2 The same restrictions are mentioned in completely different districts of Nepal (Levitt 1993).

3 A study in south India (Nichter M 1996) suggested that pregnant women preferred vitamin solutions to tablets, as it was thought that the latter could not be digested. If taken on a regular basis during pregnancy the stomach would fill up and leave little room for the fetus.

4 The need for warmth after birth is a common theme throughout south Asia (Blanchet 1984).

5 The sun (*Surya*) is a male deity and is often worshipped as a symbol of purity, so it is pertinent that a baby should be shown to the sun during *Nwaran* a "naming" and "cleansing" ceremony.

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