Chapter 13

Bolivian Women’s Experience of Pregnancy, Birth and the Postpartum: Perspectives from the Quantitative Data

13.1 The Design and Administration of the Questionnaire: Dealing with Difference

Following on from the qualitative fieldwork with women and parteras, traditional midwives, the entire research team considered the priorities for the quantitative phase at the March, 1995 seminar. An initial draft of a quantitative questionnaire was drawn up, concentrating on issues that had emerged in the course of the earlier qualitative fieldwork.

The questionnaire had as its principal object the comparison of birth experiences of women by place of birth, that is, birth at home compared with birth in state health care facilities, whether a hospital or posta (rural health post). Within this primary division, what we wanted to know about was, in one sense, simple enough — how women dealt with pregnancy, birth and the postpartum; what problems they experienced, whether they sought outside help for those problems, what forms of help they used themselves, whether they used biomedical techniques, Andean medical techniques, or a mixture of both. Our qualitative research and to some extent, previous research (Howard-Grabman, 1993) had already indicated that women have strong preferences and coping strategies but that they are well aware of the possible burdens of ill-health and death during and after birth. The task was to quantify these responses and then to see how they linked up with the current provision of maternity care from state health care services. Of specific interest was why and how women used the state health care system.

We also wanted to know whether there were differences or distinctive patterns in pregnancy and birth in relation to place of origin, whether women who were recent migrants to the peri-urban areas differed greatly in their practices and preferences from women who were living in the rural areas, whether they had greater or fewer choices in dealing with birth.

At the back of these questions lay issues which have already been highlighted in this report:

a) Poor health as a consequence of poverty;

b) Lack of fertility control;
c) Diminished access to Andean forms of health care, often for different reasons, in rural and urban settings;
d) Economic and geographical barriers that prevent access to state health care;
e) Cultural and linguistic barriers that prevent access to a state health care;
f) The problem of establishing effective health care policies and practices in the state sector;
g) The problem of sustaining effective Andean health care practices.

We took the decision to devise a single instrument which could be administered across all the research sites to obtain standardised data. It was a difficult decision insofar as it committed the teams to designing the questionnaire first in popular Spanish, for use in the urban areas, and then translating it into Quechua and Aymara. Problems arose in standardising the way questions were posed and dealing with coding responses in localities where there were distinctive linguistic and cultural differences, say from one Quechua community to another. An initial series of questions was written up and piloted in March, 1995 and in an effort to deal with these linguistic differences, the pilot was administered to women who had either very recently moved from the rural areas in question or who had just come from these localities to visit relatives in the peri-urban areas of Sucre and El Alto/La Paz.¹

Despite the pilot work, language problems were not completely overcome. The questionnaire, when translated into Quechua for instance, could not sufficiently express the range of local styles of Quechua between different rural areas and the peri-urban area.² Therefore interviewers had to further adapt the questionnaire to deal with those differences while in the field. Interviewers cited ambiguities in such replies as how women locally interpreted their birth positions: whether as ‘de cucillas agarrándose’ (squatting but leaning for support, often against a bed) or ‘en cucillas/apoyada’ (squatting while being supported by someone). There was a problem for women having hospital births with the phrase in Quechua to describe the gynaecological position for birth, ‘sirisqanmanta wichay chakis uqharisqa’ (lying down on one’s back with feet raised) and ‘sirisqanmanta’ (lying down on one’s back) was used instead to clarify the question to Quechua-speaking women (TCD/TIFAP/St. Andrews, 1995). Those working with the

¹ It proved impossible to do the pilot work on site in the rural areas because of the physical distances involved, difficulties with the availability of transport allied with an uncertain political situation during this period which led to road blocks in many parts of the countryside. The government declared a state of emergency and martial law on the 18th April, 1995.
² Women who agreed to be interviewed were asked which language they preferred to speak in, whether Spanish, Quechua or Aymara. There were women in peri-urban areas who chose to speak in Quechua or Aymara, rather than Spanish. This was an especially interesting choice in hospital settings, where hospital staff rarely had any command of indigenous languages with which to converse with women.
questionnaire in Aymara found that very direct questions did not translate easily because such directness did not reflect courtesy and respect which is intrinsic to Aymara as a language (ILCA, 1995b). Asking the duration of labour in terms of hours and days was not possible because rural Aymara women are not accustomed to thinking in those sorts of divisions. Instead, because interviewers were familiar with the pattern of the working day, they asked a series of linked questions: for example, when and where did women first feel their labour pains, when did they give birth, and then calculated the local categories of time in western terms (ibid).

The question on the amounts of blood lost after birth also confronted interviewers with difficulties of interpretation. In one of the rural sites, women usually spoke about blood loss in terms of time rather than amount (TCD/TIFAP/St. Andrews, 1995). More generally, it was noted that the importance of blood loss, during menstruation as well as during birth, was part of a larger system of ethnoclassification which itself is subtle and complex (ILCA, 1995b). For Aymara women, in relation to birth itself, blood loss featured in the meanings of ‘wana partu’ (‘parto seco’ or ‘dry’ birth) and ‘uma partu’ (‘parto húmedo’ or ‘wet’ birth), little blood loss signifying ‘parto seco’.

There was a pressing need to further contextualise the questions in terms of the system of Andean medicine. So for example, a question about whether women had used mates after birth, ‘¿Has tomado mates después de tu parto?’ (Did you take mates after the birth?) which was workable in urban contexts in popular Spanish, had to be changed in more remote rural settings to express why, within Andean medical thought, it is necessary for women to take something after the birth. Therefore the question became ‘¿Qué has tomado para limpiar la sangre después del parto?’ (What did you take to cleanse the blood after the birth?). The question then reflected the practice which is part of traditional Andean medicine to clean the blood after birth, blood having central conceptual meaning during pregnancy and birth (ILCA, ibid.).

All rural teams found difficulty with the question: ‘¿Quién te ha hecho enfermar?’ (Who helped you give birth?). It was hard for rural women to grasp whether it referred in a very broad sense to any form of help, including housekeeping during labour, or whether it referred to a family member or other member of the community participating in some specific way at some point in the birth process. Also the question did not take in the logic of the moment of birth when women often choose to have no assistance at all.

Although there was no problem in getting responses to a question on episiotomies for women who had given birth in hospital in the urban areas, possibly because the
practice was so routine, it was difficult to probe about tears during labour with women who had given birth at home in both urban and rural sites (TCD/TIFAP/St. Andrews, 1995). Interviewers argued that this was a problem of invading the innate modesty of women as well as reflecting the fact that tears might well be far less frequent when women give birth in a vertical position. Obtaining the exact ages from interviewees in several sites also proved problematic and interviewers used other contextual information, such as the age of the eldest child and prior knowledge of the women they were interviewing to establish age (ibid.).

Other problematic examples and how they were dealt with were written up by project teams in their internal reports on this phase. In general, the teams found it easier to administer the questionnaire in the peri-urban areas, although even there, difficulties with questions such as the age of women were apparent (Nina, 1995a). In the rural sites, actually doing the questionnaire was a form of intrusion into the private life of the community (ILCA, 1995b). There was also a problem with the time of year, when harvesting was being carried out. Although the rhythm of the year made no difference in the urban context to contacting interviewees, it did impact on the work in the most remote rural sites. It was noted that women were anxious and fearful of talking about their reproductive organs. They did not like to speak to people such as doctors because they feared they would be treated badly (Nina, 1995b: 7). These and similar observations (Arancibia, Platt et al., 1995a; Torrico, 1995b) raise the issue of whether such an alien mode of collecting information should be employed in such settings. All the comments on questionnaire design and administration are useful information for planning future research on childbirth.

13.2 Fieldwork sites, sample size and place of birth

Because the quantitative phase was built on the qualitative fieldwork, the interview sites for the quantitative were largely the same as for the qualitative phase with the addition of hospitals. There were ten separate fieldwork sites in all (counting urban hospitals as constituting a site). Three of the five research teams (ILCA, TCD, TIFAP) carried out their investigations in both urban and rural sites. The other two teams (CIES, St. Andrew’s) worked exclusively in an urban and rural setting respectively.

With the exception of hospital settings, population lists were not easily accessible for a complex of reasons. That factor, along with problems of using an alien mode of information collection and associated problems of access, and constraints on resources
in respect of time and location, meant that the teams employed so-called purposive sampling, interviewing all available women who agreed to participate, who fulfilled the criteria of when they had last given birth and, in the case of urban women, who fulfilled the additional criteria of being migrants. With this sampling frame therefore, it was not possible to develop a rigorous scale of confidence from the resulting quantitative data.

As stated, in all the rural sites, the principal criterion for interview purposes was any woman who had given birth in the last five years. In line with our overall objective, the criterion in the urban settings was any woman who had migrated from the countryside in the last ten years and whose last birth had been within the last five years.

In EL Alto (La Paz), CIES interviewed 76 women from the state-designated Health Districts 1 and 2. People in El Alto are often well-acquainted with questionnaire research and there was no great difficulty in getting respondents. All their respondents fitted into the category of recent urban migrants, having come to live in El Alto from the provinces ten years ago or less. 40 women gave birth in hospital and 36 at home.

The ILCA team interviewed 62 women altogether. ILCA team members also interviewed 12 Aymara women in five different hospitals located in or very close to La Paz as well as one woman who gave birth at home and a woman who gave birth in the open countryside. The women interviewed were very recent migrants from the rural areas of the Altiplano and had been in La Paz for one year or less. ILCA’s rural research was split between two sites, Inka Katurapi in the provinces of Omasuyos and Larecaja and Unkallamaya in the provinces of Aroma and Ingavi, with 23 women interviewees in the first site and 25 in the second.

The Sucre teams, urban and rural, covered a range of six separate sites, urban and rural. The St. Andrew’s team worked exclusively in the rural area of Phichichua in the northern province of Chayanta where they interviewed 24 women. One of the TIFAP

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3 Problems for the rural teams in carrying out interviews arose in relation to the time of year — the quantitative phase of the project coincided with the harvest period when women’s time was at a premium and it was recommended that such factors be taken into account in future time frames for research design (ILCA, 1995b).

4 To obtain a larger sample in difficult conditions in Phichichua, the St. Andrew’s team interviewed four women whose last birth was between five and ten years ago.

5 However, the urban sample in Sucre included diverse categories of women: some who had moved from somewhat larger towns, albeit without hospitals, to Sucre, as well as women from rural sites. There were also a few women who had come from the countryside on a very temporary basis to Sucre either to give birth here (one young Guarani-speaking woman was in that position) or because personal circumstances had brought them to Sucre where their labours began and, because they were without significant family support, they went into hospital to give birth. Additionally, there were a few women who had moved to Sucre from the countryside when they were quite young and thus had spent as much as 34 years in urban Sucre.
investigators returned to Tomaycuri, also in Chayanta Province, where she interviewed 20 women. The second TIFAP investigator worked in the peri-urban zone of Azari, some 4 kilometres from the centre of Sucre, where he interviewed 28 women. The TCD team worked in two urban sites. One comprised the peri-urban barrio of “Yanachaki” and two neighbouring barrios, or districts of shanty dwellings. The second site was composed of the three main hospitals or maternity units in Sucre. Two members of the TCD team also included a rural dimension in their fieldwork, travelling to the IPTK hospital, Ocurí which is a second-level referral hospital serving the northern Chayanta Province. The hospital offers training courses for parteras and states as a policy that it encourages women to make use of their traditional customs in giving birth. 10 women who gave birth in the IPTK hospital or with a doctor in attendance were interviewed, 9 of whom were recent migrants to the pueblo of Ocurí from the campo or countryside. There were 160 interviews from the combined teams based in Sucre, 54 with women in rural settings and 106 in urban settings.

We had set an overall target sample of 300 interviews. The actual totals from all the teams were 298 interviews with 161 home births and 132 hospital births. 5 births occurred elsewhere, as indicated in Figure 1

Figure 1 Place of Last Birth

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6 The researchers who worked in this site were anxious to give the site a pseudonym. The actual names of all other research sites are recorded in this report. Judgements as to whether the names are retained in published articles will rest with each individual research team.

7 A fourth small health centre with birth facilities was visited but the one potential interviewee was transferred while still in labour to the Hospital de la Mujer for an operative delivery.

8 Despite the physical distances involved, at least a full day’s journey, depending on available transport, between Tomaycuri, Phichichua and Sucre, there were very noticeable levels of contact with urban areas. For example, in Phichichua, one of the women interviewed had kin living in the peri-urban barrio of Sica-Sica on the edge of Sucre. The husband of another interviewee travelled to the ferias (fairs) in Sucre at Easter and around Corpus Christi, to engage in animal trading. Many of the urban interviewees had migrated to Sucre from Chayanta Province.
There were 196 women (66%) in urban settings and 102 (34%) in rural settings. By an urban/rural divide, the breakdown of births, in home or hospital, is shown in Figure 2:

![Urban/Rural Place of Birth](image)

**Figure 2 Urban/Rural Place of Birth**

There are two possible diametrically opposed factors to bear in mind about home births in the urban areas. Women may want to give birth at home but be forced into hospital because there is no family support system for them to give birth at home and no *partera* in their immediate locality either. Alternatively, there may be some women who might want to give birth in hospital but for whom hospitals are excluded for economic reasons. Birth in the *postas*, if women in rural areas actively desire that option, is limited by the fact that the *postas* are often empty for months at a time because conditions for the *sanitarios* are not conducive to keeping their families with them in the *postas* (Arnold and Yapita, 1994: 8).

There were some interesting anomalies around the place of birth. One of the urban births actually took place in the entrance hall of the hospital while the woman was waiting to be admitted. Another took place in a taxi on the way to hospital, and another while a woman was walking. In one instance where a woman gave birth in the open countryside, she went to the hospital after the birth to seek treatment for complications which arose subsequent to the birth.

In two of the rural sites, Phichichua and Inka Katurapi, during one birth and three births respectively, the *sanitario* (para-medic) or auxiliary nurse from the *Posta Sanitaria* were present in the woman’s home for the birth or around the time of birth. A fifth home birth was attended by a North American doctor (in Inka Katurapi). One of the two births which took place in a rural *posta*, happened there because the woman was married to the *sanitario*.9

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9 This woman was an active advocate for biomedical birth in her community (Arancibia, Platt et al., 1995).
It is worth noting that the fees for *parteras* are greater than the fees owing to the *sanitario* within the biomedical system and that when women and their families choose to avail of the services of the *partera*, they do so as an active choice, not governed just by economic factors (Arnold and Yapita, 1994: 13).

### 13.3 Socio-demographic characteristics and other special concerns from each site

Although the questionnaire was a single instrument across these diverse sites, the very diversity led the teams to different emphases and themes in writing up their individual reports on the quantitative phase to sufficiently express these patterns. The most important aspects of these are discussed in this section. First however, figures on the distribution of age and parity are discussed.

#### 13.3.1 Age and parity

By age group, the total sample of 298 women broke down as shown in Figure 3:

![Figure 3 Respondents by Age Group](image)

The question about parity was asked in two parts: how many live children and how many dead children the interviewee had. It was a difficult question to phrase because we took a decision not to probe about possible abortion-related pregnancies. Therefore the following figures must be read, bearing in mind that source of possible ambiguity:

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10 The current estimated rate of infant, neonatal and post-neonatal mortality together is 75 per 1,000 births for the period 1989-1994. This compares with 99 per 1,000 births for the period 1984-9 (*Instituto Nacional de Estadística*, 1994: 80).
The different sites had varying patterns of age distribution and also then, of parity (see Figure 4). The CIES team, with an entirely urban sample, had an average age for their interviewees of 26.3 years and an average number of children of 2.1 per woman. No woman in the CIES sample was older than 40 which partly accounts for the lower average number of children when compared with the national average of 5.1 per woman. However, the team points out that many women could be expected to continue having children because they were young although many interviewees expressed an interest in family planning and were given referrals to family planning centres in El Alto (CIES, 1995b). ILCA had 8 women between the ages of 40-49. The combined teams in Sucre had proportionately the largest group of women over the age of 40 with 27 women or 16.8% of their sample compared with ILCA’s 8 women which represented 13% of their sample (TCD/TIFAP/St. Andrews, 1995: 13-14).

ILCA found that in Inka Katurapi, the average age of interviewees was 30.52 years and in Unkallamaya, the average age was 33.6 years. The average number of children was highest in Unkallamaya, 6 children per woman. In Inka Katurapi, the average was five children, while in their urban sample, it was four. In the group of 8 women from all three sites between the ages of 40-49, fertility was very high; an average of ten children for the three women between 40-44 years in Inka Katurapi; an average of 8 children for the 3 women between 40-49 in Unkallamaya; and 7.5 children for the 2 women in their urban sample between 40-49. Rates of infant mortality were highest in Inka Katurapi with 1 death for every 3.66 surviving children. In Unkallamaya, the rate was 1 death...
for every 4.5 children and in ILCA’s urban sample, 1 for every 3.25 children (ILCA, 1995b: 43).\textsuperscript{11}

In the interviews in urban Sucre, the issue of parity was crossed with the variable of interview site, where there were also differences in the age profile of women. The youngest profile and lowest rates of parity occurred in the sample drawn solely from the hospital site in Sucre. There were no women over 34 years of age in this sub-sample of 28 but there were 6 women between the ages of 15 and 19. The mothers’ club in the barrio of “Yanachaki” functions as a distribution point for food to women with larger families and therefore women drawn from that site had higher rates of parity and were somewhat older; there was no woman under the age of 20 in this sub-sample and the sample was almost evenly spread between the age groups of 25-29, 30-34 and 35-39, with five cases 40 years of age and over. In Azari, again there were no women under 20 years of age while there were 15 women 35 years of age and over and 13 between 20 and 34 of the sample of 28.

In the rural sites, the age profile was also older rather than younger; out of 44 women, there were only 2 women between the ages of 15-19 and 6 between 20 and 24 years of age while there were 20 women between the ages of 35 and 49 years of age of the 44 interviewees (TCD/TIFAP/St. Andrews, 1995: 13-14).

In the terms of the analysis, it is argued that older women of higher parity have established preferences and strategies for dealing with birth which are not part of the knowledge base of younger, less experienced women who may now be affected by the consequences of the gradual spread of medical practices.

\subsection*{13.3.2 Maternal mortality}

To varying degrees, where possible, the teams attempted to collate official quantitative information on maternal deaths in the sites where they were working. They also tried, where possible, to get actual numbers from the communities themselves. The results of this were variable. In Tomaycuri, for example, the interviewer was told that there had been no maternal death in the community in the last 25 years (Torrico, 1995b). The Sucre team did attempt an analysis of the recorded statistics on maternal mortality from Chayanta province for the last available year, 1993-4. There are two separate official schedules of recording figures. They

\textsuperscript{11} ILCA did not attempt to categorise infant mortality into neonatal and post-neonatal deaths. It was not an issue of immediate concern for the project as a whole, not least because of our concern, as already stated above, not to pressure women about possible abortion-related issues, including infanticide, in a context where abortion is only legal in extremely limited circumstances. See also Chapter 9.4
both list a total of 66 women as having died as a result of being pregnant or giving birth in the twelve-month year from October, 1993 to 1994. In the first schedule, based on figures from the Censo de cementerios from the four districts of the province, the classification of causes of death used is ‘parto, complicaciones y post-parto’ (birth, complications and postpartum). Geographically, this breaks down to 15 women in Colquechaca; 15 women in Ravelo, 16 women in Pocoata and 20 in Ocurí itself. The schedule of Causas de mortalidad en la Provincia Chayanta kept by the Distrito de Salud, Ocurí lists these 66 deaths as: 37 in birth; 21 due to direct obstetric causes and 8 due to abortion. The IPTK hospital in Ocurí estimates the maternal mortality rate in the northern part of the Department of Potosí to be 600 per 100,000 live births (Secretaria Nacional de Salud, Secretaria Regional de Salud, Distrito de Salud Ocurí, IIAM.-UNICEF-IPTK, 1994: 5). The doctor at the dispensary in Macha in Chayanta thought the rate of maternal mortality was approximately 390/400 per 100,000 births. Neither doctor in the Primera Seccion of Chayanta Province had encountered a case of maternal mortality since their arrival (Arancibia, Platt et al., 1995: 52).

Neither schedule contains any more information on the precise reason for the maternal death and so brings us no closer to an understanding of what the precise difficulties are, what needs must be met in respect of emergency treatment facilities and so on. The inclusion of deaths from abortion in the schedule from the Cementerios under the general heading of ‘parto, complicaciones, y post-parto’ (birth, complications and after birth) is worth noting, given the contribution that abortion-related deaths make to maternal death statistics in Bolivia (see also Chapter 9.4 above).

These schedules which have been in use are meant to be superseded by new guidelines for the notification, registration, and investigation of deaths issued by the government in November, 1994 as part of the system of Vigilancia Epidemiológica de la Muerte Materna y Perinatal - CVMMP. The intention is to mobilise the CVMMP committees at local levels, using existing networks of medical, civic and community leaders to collect better and more accurate data about the causes of maternal mortality, which data can be channelled into the Sistema Nacional de Información de Salud (SNIS) for purposes of further analysis of the reasons for maternal mortality. The National Health Secretariat thereby hopes to have more accurate information to plan maternal health care interventions (Ministerio de Desarrollo Humano, Secretaría Nacional de Salud, 1994b: 3-6). The government wants to use a more detailed schedule of classification (including a separate category for deaths as a result of abortion) to describe ‘causas obstétricas directas’ (direct obstetric causes). The six categories the National Secretariat of Health wishes to use are: abortion oedema, proteinuria, hypertensive disorders of pregnancy,
birth and the postpartum; haemorrhage before, during and after labour, puerperal sepsis, ectopic pregnancy, and obstructed labour. The Secretariat states that one of the principal reasons for maternal mortality is the undervaluing of obstetric risk (‘subvaloración del riesgo obstétrico’, ibid.: 1) and their hope is that using these categories at local level will increase community awareness of the risks women run during pregnancy and birth. The difficulty as stated earlier (see Chapter 10.3-10.5 above) is that a risk model per se is not an efficient way of tackling the issue of responding to maternal mortality. There is also the complexity of the problem of making these categories pliant enough to fit in with local cultural categories and this does not appear to have been addressed as yet at the level of the National Secretariat of Health. Unless or until this is done, the problem will continue to be that local perceptions of danger and death simply do not correspond to the biomedical frame of reference.

It was not possible to obtain data on whether or how many maternal deaths there were outside the hospital sector in urban Sucre. The four maternity units serving Sucre reported approximately 2,425 births in 1994 and no maternal deaths.\footnote{12} CIES does not have data on maternal deaths in El Alto outside the hospital system either. But in the four maternity units it visited, there was a total of 1,763 hospital births and two maternal deaths during 1994 (CIES, 1995b: 21).

ILCA reviewed regional statistics about maternal death in the sites where they were working as well as the data about maternal deaths which had arisen in the qualitative phase of the project. In the community of Inka Katurapi, these interviews spoke of four maternal deaths in recent years. the reasons given for these deaths were:

i) A case of prolonged labour which the parteras were unable to resolve;
ii) Haemorrhage after the birth of a dead baby and retention of the placenta;
iii) Sobreparto’ or infection (with no reason to suggest why the infection had occurred);
iv) Retention of the placenta.

Their informant spoke about these deaths in the context of the years before the Posta Sanitaria was built in Inka Katurapi. But because those posts might serve a wider district than just the immediate community, it is possible that these figures relate to the larger district, and not just Inka Katurapi. If the case were the latter, on the basis of the number of live births and therefore the universe of women giving birth, ILCA

\footnote{12} There was an estimate only of the annual births from the Lajastambo Hospital on the outskirts of Sucre of 600-700 births and also for the Dispensario San José de Poconas (600 births).
estimated a rate of maternal death 5 times the national average at 2,116 maternal deaths per live births. However, with the cautious assumption that the deaths relate to a wider district, they also produced a revised estimate of 576 maternal deaths for every 1,000 births. The ENDSA figure for maternal deaths in the rural Altiplano is 591 maternal deaths per 100,000 births (ILCA, 1995b: 12-13).

ILCA also explored information in the community of Unkallamaya. One interviewee in the community who had lived there for 20 years cited 6 maternal deaths over that period, three in hospital and three at home but the informant was felt to be exaggerating. They found it difficult to confirm this information with the authorities of the community who did not wish to harm the reputation of the community by commenting on such matters. The authorities argued that three cases had been related to childbirth and that the other three women’s deaths were the result of illnesses quite separate from childbirth. The team then turned to the Registro Civil de Collana Norte, where they found recorded five maternal deaths in the five years from 1990-1994. Based on the estimated numbers of births for the community over this period, and these three separate sources of information, the rate of maternal death per 100,000 births was either 850 (interviewee), 425 (community authorities) or 928 (civic register of deaths). According to previous regional studies the rate of deaths may well be much higher for this community than for Inka Katurapi. The team concludes that this theme of where and how maternal death occurs is one that requires an expanded study at national level (ibid.: 17-19).

As pointed out in Chapters 8 and 10 above, it is extremely difficult to derive accurate information about maternal deaths from small-scale local studies. The efforts by the research teams to uncover accurate data from their various sites is an indication of how vital further study is on this issue, especially given the new system of monitoring the government has put into place. An evaluation of the new system, with an analysis of the biomedical categories and efforts to triangulate the data from the community level could prove very fruitful for future policy efforts.

13.3.3 Language and language usage

Information on language was compiled in two separate questions on all the interview sites. The first question was which languages people spoke and the second question was which language was spoken in the home.

In El Alto, CIES found that bilingualism was the dominant pattern amongst its 76 interviewees. 100% of the women spoke Spanish but 92% spoke at least one other
language. 82.9% spoke Aymara and 14.5% spoke Quechua. Some women were trilingual (5.3%). 8% spoke only Spanish (see Figure 5).

![Figure 5 Languages Spoken](image)

20% spoke only Aymara in the house while 41% spoke only Spanish in the house. 38% spoke Aymara and Spanish in the house.

The language patterns in urban Sucre were far less markedly bilingual with 28 women or 26.4% speaking only Quechua. 5 spoke only Spanish. In the rural sites, 36 women out of 54 (66.6%) spoke only Quechua. In the overall figures from urban and rural sites, 53.75% spoke both Quechua and Spanish while 40% spoke Quechua only. 5 women spoke Spanish only and 1 woman spoke a combination of Quechua and Aymara. 67.5% or 108 of the women used mainly Quechua in their homes.

The ILCA team found the district of Inka Katurapi to be the most traditional community in the sense of having an intense loyalty to their language, 20 of the 23 women they interviewed speaking only Aymara. In Unkallamaya, all the 25 women interviewed were bilingual while in their hospital sample in La Paz, five women spoke only Aymara.
Figure 6 presents the composite data. In the sample as a whole, 30% or 89 women spoke an indigenous language only.

![Figure 6 Overall Distribution of Languages](image)

Given that medical personnel are less likely to be bilingual the further one moves up the hierarchy, with medical doctors apparently having the least degree of bilingualism (see Chapter 9), this is a serious issue in terms of women's maternal health needs, more serious still when it means that the lack of comprehension of both language and culture precludes medical personnel from a ready understanding of how Quechua and Aymara women manage their own pregnancies and their birth experiences. (See also Chapter 4.3 above and 13.4 below).

### 13.3.4 Losses in traditional customs and the impact on women

The undercurrent that runs throughout the project’s work is whether communities with their language and traditions will continue to be kept alive, despite increasing migration to the peri-urban areas and of course, the immediate focus for the project is how this may or may not affect women’s health as mothers. The substitution of an urban way of life, with proximity to hospitals and the state health care services obviously does not confer an automatic improvement in people’s life chances. There is evidence to suggest an increase in grinding urban poverty as the population increases in the peri-urban areas (CEDEC, 1992).
CIES, with an entirely urban sample wanted to examine the issue of continued adherence to cultural traditions in the urban setting and to do so, inserted additional questions on levels of formal schooling and on clothing. They wanted to use the question on traditional dress as a proxy, along with the issue of language usage, to measure the daily adherence to Aymara customs. 54 women of their sample (or 71%) continued to dress in the *manta y pollera*, the shawl and embroidered skirt associated with the Aymara traditional communities, rather than in identifiably ‘modern’ urban clothing (CIES, 1995b: 3). In the CIES sample, the average number of years of schooling was 5.7 years but CIES noted that 67% of their interviewees had between 1 and 5 years of schooling. The lack of formal schooling constitutes one aspect of an enormous socio-economic disadvantage in the urban setting. On the other hand, they also noted that the higher the level of schooling, the more likely it was that their interviewees gave birth in hospital (CIES, 1995b: 2, 9). This suggests that formal schooling is one of the routes whereby women begin to let go of traditional customs.

ILCA observed that young women with a higher grade of formal education knew less about cultural categories such as ‘*cuerpo frío/cuerpo caliente*’ (cold and hot body) or ‘*parto seco/parto húmedo*’ (dry and wet birth). Inevitably, first-time mothers knew less about the birth process but this seemed not to be just an issue of parity. The older women spoke with confidence and authority about birth within the framework of Andean ethnophysiology. To examine this issue further, ILCA looked at birth position by language preferences to see what the connections might be between adherence to the community’s language and the position adopted during birth. They did find that the traditional position of all fours ‘*de 4 patas*’, was by far the most commonly used position amongst the women in Inka Katurapi whereas the bilingual rural community of Unkallamaya preferred the intermediate positions of ‘*sentada*’, (sitting) and ‘*acostada*’ (lying down). This can be seen as an intermediate position, literally and culturally, between that alternative of kneeling on all fours and the full lithotomy position used in hospitals (ILCA, 1995b:35-39). With different traditional positions for birth in the Quechua-speaking areas of Tomaycurí and Phichichua in northern Chayanta, there was nonetheless a similar pattern of adherence to a vertically-angled position amongst women, the majority of whom were monolingual (Arancibia, Platt et al., 1995a; Torrico, 1995b).

It is important to comment that in the formal school system, children are being taught in both explicit and implicit ways that many of their traditions are unacceptable, including the way they give birth (Personal communication, Dr. Denise Arnold). In relation to the community of Unkallamaya, for example, which is completely bilingual, the team noted the nearby location of an evangelical centre which has been there since the 1940s and
has promoted literacy, but in the Spanish language only (ILCA, 1995b: 35,39). Young women giving birth for the first time were far less conversant with cultural categories to describe birth than older women and it was evident in the urban areas that the position of ‘de cuatro patas’ was seen as a position for ‘animals’, not for humans (ibid.: 20, 43-44). We will return to this theme in 13.4 below when we discuss birth practices in detail.

13.4 Composite findings on pregnancy, birth and the postpartum period

13.4.1 The amalgamated data set

The following commentary and diagrams have been derived from the amalgamated data across all the research sites to the central questions of how pregnancy and birth are being managed. As indicated above, the data was first analysed by the teams in individual reports which were circulated internally to all other teams in the project. The three data bases were then merged for the purposes of the present analysis.

At the time when the questionnaire was initially being piloted, there was considerable debate about the order in which questions might best be asked. Because of the heavily medicalised approach to birth beginning with pregnancy which has been such a strong phenomenon in the twentieth century (Oakley, 1984), there was anxiety to avoid the presentation of questions in such a way as to present pregnancy and birth as stages similar to the way obstetric medicine views the process. The decision was taken last March to place questions about pregnancy at the end of the questionnaire but in fact the teams found that this approach did not prove to be as advantageous in the field as we had assumed. Women had already replied in detail about their labours and births and many became confused when then asked questions about the pregnancy. Here, the amalgamated data is presented beginning with pregnancy and is analysed in terms of how women perceive their experiences and also in respect of what practices, both Andean and biomedical, are seen as beneficial in their impact or not. One further general comment on the data should be made. Given the alien nature of a questionnaire in the rural sites, we have no way of telling how great a bias might have been introduced into the quantitative data by women not wanting to respond in this structured way to questions about their relationships with traditional Andean practices. A clear-cut example of this is the issue of a baby in a malpresentation, ‘wawa trancada’, during pregnancy. Although in qualitative interviews in Phichichua, the women made clear that they had used the technique of the manteo, where a woman is rocked in a blanket held tightly at the corners, to
deal with malpresentation, in the quantitative phase, they reported that they used no *manteos* (Arancibia, Platt et al, 1995a).

### 13.4.2 Pregnancy

#### 13.4.2.1 Physical and other problems during pregnancy

We have already argued in Chapters 10-12 that obstetric medicine has favoured antenatal care as an effective cornerstone of maternal health care policy because of the perceived advantages of screening women for risk indicators. We have also reviewed the growing arguments in favour of the provision of emergency obstetric facilities and moving away from the aspiration for universal antenatal care. The benefits of antenatal care have been challenged on two grounds: a) the predictive accuracy of antenatal screening in identifying women who may be at risk and b) the difficulty of financing adequate coverage and take-up of the service in developing countries.

As stated in Chapter 10, the emphasis on antenatal care is a formal part of the Bolivian government strategy to reduce maternal mortality as expressed in *Plan Vida*. The commitment to this strategy emerged in interviews with senior obstetric and health care service planners in the course of the project. Obstetricians argued that the greatest single barrier they face to improving maternal health is the resistance of women to attend antenatal care (Murphy-Lawless, 1995). With only 52.5% of women receiving any antenatal care, from a doctor, nurse, nurse auxiliary or *sanitario* (*Ministerio de Desarrollo Humano, Secretaria Nacional de Salud*, 1995), the planners are anxious to increase the number of women attending and the number of visits per woman, ideally to four or five.

In 1993, the average number of antenatal visits per woman was 1.9 for those who did attend (*Ministerio de Desarrollo Humano, Secretaria Nacional de Salud*, 1995). Currently, the women with no formal state schooling are least likely to take up any form of antenatal care, while almost 70% of women with an intermediate level of schooling have had some care during pregnancy (*Instituto Nacional de Estadística*, 1994: 90). Measured against years of schooling, the argument is suggestive that increased levels of schooling will increase uptake of antenatal services and indeed education has been used as a proxy measure for the improvement in maternal health. But increasing the numbers of women involved in formal schooling does
not guarantee an automatic increased uptake in antenatal care nor a reduction in maternal mortality.\textsuperscript{13}

A major difficulty with the policy thinking on antenatal care is where it fits into the scheme of things for women themselves. What is at issue is how women view pregnancy and whether or not women who are largely outside the western biomedical system see pregnancy as problematic. Our evidence is that women do not see pregnancy as especially risky, despite minor symptoms. Figure 7 presents responses from women on their physical reactions and difficulties during pregnancy:

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{problems_during_pregnancy.png}
\caption{Problems During Pregnancy}
\end{figure}

Just over half the sample, 55\% of women, reported disturbances or changes during pregnancy. The five most commonly reported problems were nausea, vomiting, cravings, aches and pains and faintness. However, the researcher in one site commented on prolonged vomiting and saw this as contributory to consequent ill-health because women were not able to eat in pregnancy (Nina, 1995a: 2). What might be asked about prolonged vomiting is whether it is part of a strategy known in other parts of the world as ‘eating down’, that is eating less so that the foetus will not grow so large.

\textsuperscript{13} Maine (1992: 24-25) points out that in the United States, in 1915, when 90\% of the population attended formal state schooling, with similar proportions for boys and girls, maternal mortality stood at 608 maternal deaths per 100,000 live births.
as to cause obstructed labour. There is no hard evidence on this in the Andean context from the teams’ data. Another researcher commented that fear of having a large baby did not appear to be reflected in women’s eating patterns during pregnancy because women believe that the foetus is feeding on the mother’s blood, not on what she consumes as food. On the other hand, there does appear to be a notion in the rural site of Tomaycurí, that cephalo-pelvic disproportion is attributable to the baby remaining in the womb past what the woman sees as the time when it should be born (Personal communication, Cassandra Torrico).

The three problems in pregnancy which are seen as indicators of a poor maternal and/or foetal outcome in the biomedical field are oedema, malpresentation and haemorrhage.

28% of women in the overall sample reported ‘hinchazón’ (swelling) or oedema during pregnancy. Strictly speaking, because the physiological oedema of normal pregnancy cannot be differentiated clinically from oedema which is associated with pre-eclampsia, it is no longer considered on its own a reliable indicator of pre-eclampsia in pregnancy (Enkin et al, 1995: 55; Silverton, 1993 —see also Chapter 11.5 above). Oedema of the hands or feet or generalised oedema is however being taught as an indication for referral of a pregnant woman to a health centre or hospital in the teaching manual used by auxiliary nurses in Bolivia (Ministerio de Previsión Social y Salud Pública, 1987: 48). In the completely urban sub-sample from El Alto, 39% reported the symptom (CIES, 1995b: 6). Eight of the thirteen women in the very small sub-sample of urban cases in the ILCA study also reported oedema and the researchers noted that as a consequence of having oedema, women went to hospital seeking treatment. Women in one of their rural sites although they reported hinchazón did not search out treatments for it and did not consider it a problem (ILCA, 1995b: 63-5). There is a problem of designation about hinchazón in this sense —if women have identified it as a largely benign manifestation during pregnancy, which indeed it is, it is difficult to treat it as a sign of risk. The Sucre teams had a somewhat different profile, with 25% of the peri-urban interviewees reporting hinchazón and 39.5% of the rural women reporting the same.

In respect of haemorrhage, 8% of women from the overall sample reported this during the pregnancy. However, all the teams noted that there were problems of interpretation of what constituted blood loss, let alone haemorrhage. Of the 18.4% of women who reported haemorrhage in the CIES sample, the team observed that it was not possible to differentiate between an antepartum haemorrhage and the bleeding which can occur in the first few months of pregnancy at the time of the last missed
menstrual period (CIES, 1995b: 5). The percentages of women who suffer serious antepartum haemorrhage, from either placental abruption or from placenta praevia, is tiny, perhaps 2% of all births (see Chapter 11.2.1 above). Because haemorrhage can be serious, guidelines for rapid referral, such as the Manual Guía for auxiliary medical staff, quite rightly include haemorrhage as a major complication. The difficulty with the Guía is the same as the quantitative question reveals: a huge conceptual difference regarding blood and the meaning of blood. Unless those differences in meaning are resolved through scrupulous attention to how women themselves assign meanings and values to blood, guidelines for referral are useless. Moreover, what the biomedical system needs to be alert to are the immediate measures women employ when they suffer what they judge a serious loss of blood.

In relation to malpresentation, 18% of women identified this as a problem during pregnancy. This is a problem that women reported being very worried about during pregnancy in some of the qualitative interviews (Torrico, 1995a). In general, the occurrence of breech births is about 3.5%, many babies turning to the vertex position in the final weeks before birth (Cunningham, 1993: 277). It is difficult to interpret what malpresentation means in these instances, whether it includes malposition, for instance, and whether women are aware that the foetus has not yet turned to a vertex position, because the movement of the foetus feels different or the pregnancy feels less comfortable. Dealing with malpresentations is one of the obvious skills of the partera or unquchij (person whose skill is to induce a birth successfully) or qaquri (a healer who is very skilled in massage). Family members also have skills, knowledge and experience that women can draw on. On the other hand, malpresentations may subtly be connected with anxiety about obstructed labours which have the potential for ending in serious puerperal sepsis due to anaerobic bacteria. Babies born feet first can be considered a kind of malediction by some women (Torrico, 1995b).

Almost a quarter of the sample reported experiencing fear at some point. 7% of the sample reported experiencing violence from their husbands during pregnancy. Finally, 11% of women reported no problems at all during pregnancy.

Overall, it is not apparent from the self-reporting on signs of discomfort and distress, whether or how many women are now thinking of pregnancy in more biomedical

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14 It was the impression of some interviewers that women were hesitant to confirm that they were victims of violence. In one interview in a Sucre hospital, the woman, having replied that she had suffered from violence during her pregnancy, broke down in tears at the end of the questionnaire and stated that she feared returning home from hospital to her husband (Fieldwork notes, Murphy-Lawless, 17 May, 1995). The sanitario in Qaqachaka reports that he must often attend to women who have been victims of domestic violence (Arnold and Yapita, 1994: 9).
terms or whether there is a plurality of interpretations, both Andean and biomedical about any given sign (which might be the case with swelling and oedema for example). In at least some localities, early pregnancy appears to be a time of real anxiety for women with concern about miscarriage and the concomitant sudden loss of blood being perceived as a risk to the woman’s life (Arnold and Yapita, 1994: 23). However, as noted elsewhere, there are complex meanings attached to blood loss and to how danger is construed in relation to blood loss (Torrico, 1995b). The notion of blood as ‘the force which gives life to the human body’ has to do with what makes one human (Arnold and Yapita, 1994: 22) and there is no easy or clear correspondence between these meanings of how blood and blood loss are perceived and biomedical notions of haemorrhage. In at least one other locality, problems during pregnancy did not seem to create alarm about the birth process itself. In other words, there was no feeling that a problem in pregnancy would inevitably complicate the labour process (Torrico, 1995b). Yet there are prohibitions on women to cease doing strenuous work in the fields (Arnold and Yapita, 1994: 30-31). In some communities, there appears to be a very specific categorisation of risk, based on the circumstances of the individual woman (ILCA, 1995b) whereas in another community, this does not seem apparent (Torrico, 1995b: 17). ILCA observed that higher parity, six or more children, was associated with a degree of risk in their qualitative interviews with women but that older women with relatively low parity could experience problems (ILCA, 1995b: 52). ILCA and the combined Sucre teams both attempted an analysis of problems in relation to parity, especially grand multiparity but there were too few cases to make any meaningful judgements about the effects of parity as such. The concept of a woman ‘suffering’ during pregnancy (Arnold and Yapita, 1994: 30-1) or being ‘ill’ (personal communication, Tristan Platt) and of how ‘danger’ in pregnancy is being viewed may have different interpretations in different regions. These notions, however, are not the same as or equal to biomedical risk models in pregnancy and birth. It is also important to observe that the woman determines when she needs to seek help, on the basis of how she is ‘reading’ her body. In other words, the decision-making about a problem in pregnancy is not already invested in a professional expert. In this regard, it is interesting to note that one researcher interviewed a woman who had had problems in pregnancy, had been in pain and had attended a partera for treatment and massage. The partera diagnosed the difficulty as being a baby in the wrong position. When this woman came to give birth, despite the difficulties she had experienced during pregnancy, she did not feel the need to summon the partera when she went into labour and managed on her own (Torrico, 1995b: 6).

15 It was noted in the CIAES work that women are cautioned not to lift heavy weights which could drive either foetus or placenta into the wrong position (CIAES, 1991: 31).
13.4.2.2 Seeking advice and help during pregnancy

Notwithstanding such accounts, because of the emphasis on antenatal care as part of government strategy, we wanted to know whom women sought out during pregnancy for advice or help. Figure 8 presents this data:

![Figure 8: Seeking Help During Pregnancy](image)

44% of women visited state health care personnel during their pregnancy. Personnel is defined as including doctor, nurse, auxiliary nurse, and sanitario. This figure is 4.5% below the national percentage for attendance during the pregnancy. The other most important figure is the number of women, 28%, who saw no one. On the basis of the qualitative data, the assumption is that these women felt there was simply no need to ask anyone’s help or advice at that point.

The third noteworthy figure is the 6% attending parteras. This is well up on the national average of 0.5% (Instituto de Nacional Estadística, 1994). Broken down by team, the ILCA team had a somewhat higher percentage, 9% of its sample attending parteras, compared with 5.2% (CIES) and 5.6% (TCD/TIFAP/St. Andrew’s). ILCA suggested that this might be related to women who had already had problems in previous births as well as first-time mothers (ILCA, 1995b: 93). But the most common response in ILCA’s interviewees, if a woman wanted to ask anybody for advice, was for her to turn to her husband or another family member, mother, mother-in-law or some other relative (ILCA, ibid.).
In the CIES data, 57.8% of their interviewees visited state health care personnel during pregnancy; the combined Sucre teams, had the highest percentage of the three teams, 61.25% (TCD/TIFAP/St. Andrew’s, 1995: 22). These figures on attendance of state personnel may well represent a series of differentiated strategies. Undoubtedly there is a growing acceptance of biomedical approaches to pregnancy and birth in urban and peri-urban areas. Even in the two most remote rural sites of the Sucre teams, 10 women of 44 went to see either the doctor or the sanitario. However, a portion of these percentages may also represent women who might want reassurance, for example, about the position of the baby, especially as malpresentation poses the one significant difficulty that figures in women’s conversations about pregnancy. They might choose to get that information from a doctor or sanitario. In the peri-urban areas, they might be attending these people in the absence of a partera in the urban setting to see if all is normal as far as the baby’s position. The combined Sucre teams suggested that once women had information that there was no abnormality in the pregnancy, they did not return for further antenatal care and handled the birth itself on their own (Aguilar and Bradby, 1995a; Torrico, 1995b). Finally, 14% of the sample sought help or advice from within their own family circle during pregnancy.

13.4.2.3 Use of traditional Andean practices to assist women during pregnancy

Figure 9 deals with the use of the three important practices in Andean medicine which women might avail themselves of during pregnancy: mates or herbal teas, manteos, a relaxation technique to help loosen the body, and massages.
Of the 298 women, 37% used manteos and 34% had massages. There were differing use patterns from the different sites and differing interpretations of those patterns. The ILCA team suggested a progression where the young first-time mothers take on the ‘package’ of all the traditional customs around birth, as much as anything else as a form of apprenticeship in learning about pregnancy and birth. Then as they become more confident, they discard many of the traditional supports, only coming to re-adopt them in later years as a result of higher parity and more frequent complications (ILCA, 1995b). The women in Tomaycuri (one of the remote rural sites of the Sucre teams) tended to use manteos more than massages during pregnancy, because it was argued, they are common knowledge. Husbands with their male relatives can easily perform them and are experienced with them whereas massages are specialised forms of knowledge, especially if the partera is a highly skilled and learned one (Torrico, 1995b). The researcher in this site also noted that massages tend to be used to bring the baby down the birth canal before labour begins whereas manteos are more commonly used during labour and before birth. For the women from Tomaycuri, a certain kind of pain in pregnancy is an indication that the baby is in the wrong position and, if the woman does not feel that pain, she will not think it necessary to seek out the help of a partera with massage (ibid.).

Manteos and massages were used by just over 38% of the CIES sample, manteos being done usually with the assistance of family members, rather than traditional midwives. Of the women who had massages, the groups were almost evenly split between those who availed themselves of it once only or twice or more during pregnancy (CIES, 1995b: 4). Usage was lowest in the samples from the Sucre teams, 28% using manteos and only 22% using massages (TCD/TIFAP/St. Andrew’s, 1995: 23).

It was noted in Chapter 11.3 above that external version is once more being explored within obstetric medicine as a far more acceptable alternative to routinary Caesarean sections for women with babies in the breech position. The descriptions of version sometimes talk about relaxing the mother’s abdomen with massage (Gaskin, 1980) before beginning to turn the baby. It appears from the qualitative data that the resources which parteras have are of a different order of skill altogether, a very extended version of what can be termed a preventative physiological approach to correct the complications of malpresentation before they arise in labour. The basic premiss of the massage strategy used by the partera in Tomaycuri, for example, is that one must align the internal organs with the spine and she is using the spine as her point of reference as she seeks to reposition the baby. This is described in Torrico 1995a). There is another full description of massage, employed in Liq’unipampa in Nina (1995a: 2) which suggests the complexity of the physiological
account of the body on which the techniques are based. The techniques were also discussed at the workshop for parteras held in El Alto in February, 1995 and what the parteras asked for was greater appreciation and understanding of their skills (Hoy, 1995). These bodily technologies deserve and require extensive documentation and evaluation because of their obvious benefits and support to women.

The consumption of mates, during pregnancy was the least used of those three forms of self-directed help. Only 26% of women took matés during pregnancy. The local patterns of consumption were highly individual as was the actual range of mates in use. In the ILCA sample, mates were used in all three sub-sites (ILCA, 1995b: 95). From the Sucre teams, it appears that it was mostly an urban practice. In the two most remote rural sites, mates were not used at all: in Tomaycuri, because it is not the custom for women to take mates during pregnancy; but in Phichichua, it is suggested that non-consumption was because the local sanitario who staffs the medical post, has signified his disapproval of mates (Aguilar and Bradby, 1995a; Arancibia, Platt et al., 1995a; Torrico, 1995b).

13.4.2.4 Summary of findings about pregnancy: problems and care

In summary, the data on pregnancy points to quite different definitions of what pregnancy means between the state health care system, committed to increasing the take-up and extent of antenatal care and women themselves, most of whom do not appear to consider pregnancy as a great source of worry.

A minority of women experienced difficulties in their pregnancies as distinct from the more common range of discomforts and changes. A larger percentage of women from the urban sites sought out assistance or advice from the state health care system. This may have been because they wanted reassurance or information on specific points (the position of the baby was possibly the most important specific information they wanted). If women sought care at all, the data indicates that almost as many women made use of the Andean techniques of massage and manteos as went to consult with state health care staff. Information on the patterns of decision-making, about what constitutes a hazard for women in their terms of reference and how they want to deal with those hazards, needs to come into play in looking at what the formal health care system can best offer to women during their pregnancies, and how it can otherwise reinforce the traditional practices of massage and manteos that women are using.
13.4.3 Birth: process and outcomes

13.4.3.1. Who helps women at home and in hospital?

How women deal with labour and birth is largely determined by where women give birth; that is to say, if women give birth at home, there are a number of different patterns they can avail themselves of, depending on location, custom and age. However, if they give birth in hospital, there is a fairly uniform ‘package’ of care, varied only by what the hospital personnel define as a problematic labour. The absolute lack of professionally trained midwives in the Bolivian state health care system and the imbalance in the public service of nurses to doctors, in which there is one fully-qualified nurse to every 1.9 doctors (see Chapter 9.3 above), means that the vast majority of births in hospitals will be managed by doctors, with nurses having at best a secondary role. This is likely to have a very considerable impact on the level of medical intervention. See Figure 10.

Figure 10 Composite Data on Birth Attendants During the Last Birth

There were difficulties in interpreting the replies to this same question when we asked women who gave birth outside the hospital, as discussed in 13.1 above. The greatest difficulty appeared to be in defining what constitutes help and when this help is given
in the birth process. The pattern of women giving birth on their own and then calling in a husband or other family member to help cut the cord was apparent in Tomaycuri (Torrico, 1995b). ILCA noted that some women gave birth on their own by preference, others through circumstances. They also noted the pattern of women giving birth attended by family members from the husband’s side of the family, the _partera_ also coming from the husband’s family if one were present. (ILCA, 1995b: 51). There were differences between first-time mothers and more experienced mothers, the former searching for the help of a _partera_ (ILCA, 1995b: 43-44). In Tomaycuri, calling in the _partera_ appeared to be a move of last resort in a difficult birth (Torrico, 1995b). See Figure 10.

All three categories of helpers, family, _partera_ and medical personnel could be present at the birth and there could be conflicting interpretations as to which attendant helped in which way at the birth, as was the case of a woman who gave birth to twins with a _partera_ present but also with the auxiliary nurse present (ILCA, 1995b: 49). In another instance, a woman answered that she had given birth both alone and with a _partera_. On probing her reply, it was revealed that the _partera_ had been with her during labour and had helped her with massages, _manteo_, burning herbs and preparing appropriate _mates_ to drink. But at the moment of birth, the woman was alone (Arancibia, Platt et al., 1995: 18).

The figures above correspond broadly to the ENDSA figures for attendance at birth (_Instituto Nacional de Estadística_, 1994:95). However, it may well be that the figure for births alone, 7% in our data, 2.3% in ENDSA, would be a higher figure altogether if the meaning of assistance at birth’ includes support beforehand and support after birth, such as cutting the cord after birth, with women still on their own for the moment of birth itself. Of course, the 7% alone does not necessarily mean that these 24 women gave birth altogether without recourse to assistance if, for example, they encountered difficulties during birth. But it would appear that they often judged the situation according to their own criteria. The very diversity of patterns raises the issue of how the birth process is interpreted by women as distinct from the position of the National Secretariat of Health which would like to see the percentage of births attended by trained personnel rising rapidly (_Ministerio de Desarrollo Humano, Secretaría Nacional de Salud_, 1994). If women do not see that as being logical or useful for them, it is very unclear how maternal health care policies can proceed with this as a central element in their care package.
13.4.3.2 Length of time in labour

![Length of Labour Pie Chart]

The question on length of labour reflects two separate issues, both related to the place of birth (see Figure 11). The first has to do with obstetric concerns about prolonged labour and what might be termed the 12-hour rule. According to obstetric thinking, the longer a woman is in labour, the greater the possibility that she may develop a serious complication, most usually because of obstructed labour or infection if the membranes have ruptured early on in the labour, and there has been no further progress towards giving birth. If she is in her home, the anxiety is that she will not have resources to hand to deal with complications and, if she is a long distance from a medical facility, the time it takes to transport her may mean she faces serious illness and possibly death. The 12-hour rule is meant to deal with this contingency and one of the principles for primary health care teams working with maternal health issues is to impress on women, on empirical midwives and on community leaders, the necessity of seeking biomedical help if labour lasts longer than 12 hours (MotherCare Matters, 1994). The 12-hour rule has been incorporated into WHO policy on the partograph which is seen as a cheap and effective way to teach paramedic staff how to monitor women’s labours outside the hospital context and therefore to get help for them or get them to assistance in the case of prolonged labour (WHO, 1988).

Yet the beginning of labour cannot really be timed precisely. It is individual for each woman and for each pregnancy of each woman. The mucous plug may come away and labour may start. The plug may come away hours or even days before contractions begin.
Reducing maternal mortality and morbidity in Bolivia

The early phases of cervical dilatation may go entirely unnoticed because the woman is quite unaffected by them. And the first stage of labour is not predictable in terms of time. That process of dilatation can take from three hours to three days which, if the individual woman is healthy to begin with and the foetal heart is strong, poses no difficulty (Gaskin, 1980). The problem with the 12-hour rule is the presumption that the average figure of 12 hours can cover all those who are at risk when in fact, it cannot.

The second issue about length of labour is that if women give birth in hospital, obstetric teaching about the 12-hour rule is such that women have their labours artificially accelerated to make sure they give birth within that time (this school of thought, active management of labour will be discussed in Chapter 14). Accelerated labours carry their own discomforts and risks and may lead to the so-called ‘cascade of intervention’ (Inch, 1989). This may in turn adversely affect women and influence their judgements about using hospital services or not.

Of the total 298 births, 60% fell within the 12 hour period. Another 20% fell within 24 hours. Of the 52 labours which took 24 hours or longer, 35% of them were reported in the ILCA sub-sample. The team noticed that these labours occurred either with young first-time mothers or with multiparous women over 35 years of age. 8 of the 18 were in the most remote rural site of Inka Katurapi, several of these apparently accompanied by the strong bleeding at the time of birth described as ‘parto humedo’ (ILCA, 1995b: 57). 4 of the 10 hospital births in Ocurí in Chayanta Province were labours of two days’ length. Three of these women were transferred to hospital from their homes by family members when it was judged they would not be able to give birth at home. Once in hospital they were placed on an oxytocic drip (Aguilar and Bradby, 1995a: 27). Of the 37 home births in urban Sucre, 70% took place in under 12 hours. In the combined Sucre sub-sample of 160 births, 11 of the labours which lasted 24 hours or more took place in hospital.16

The issue is whether these longer labours endangered maternal well-being. In at least one sub-sample, in Tomaycuri, the length of time itself was not construed as a sign of danger. None of the women with longer labours felt the necessity of using a partera to assist them nor did they necessarily use more techniques to hasten their labours than women with shorter labours. But labours longer than 24 hours were considered difficult labours in Tomaycuri, by the women and by the local partera, in their judgement, the cause most probably being the result of the baby being in the wrong position (Torrico, 1995b).

16 It is not clear from the data at which point women entered the hospital in the course of their labours and therefore whether or not medical staff judged them to be in prolonged labour and took action on that basis.
Women do have regard for whether they are having easy or difficult labours although time is not the key element in defining which is easy and which difficult. Labours of more than 24 hours appear to be construed as problematic, in conjunction with explanations such as malpresentation and whether the body is ‘hot’ or ‘cold’. If the body interior is ‘cold’ for instance, women expect to have long, hard labours (Torrico, 1995b: 5). The lesson here appears to be that the 12 hour rule is meaningless for women, that 24 hours is a better marker, more in line with the sensibilities in Andean communities which consider time and circumstances together. It is also important to employ Maine’s estimates of the time needed to transport women to hospital in cases of real emergency. This is a concrete strategy for dealing with complications when they arise, not because they might arise.

13.4.3.3 Birth positions

The uterus in labour is the strongest muscle in the body (male or female) and perhaps it is that strength that is recognised in the Quechua word ‘wijchuy’, literally ‘to throw out’ the baby. One researcher in the Quechua-speaking area of Tomaycuri was struck by the fact that the birth positions women use are all ‘forceful’ positions, positions where physical forcefulness can be easily expressed, whereas during illness one lies down (Personal communication, Cassandra Torrico). Gélis (1991: 121-133) has examined historical evidence on birth positions and concludes that women have most usually chosen positions which leaves the body unconstrained for a job of work that requires great strength. Vertical positions in labour or positions where the body is on a vertical axis, such as standing, kneeling, all fours or squatting have supplied that freedom of movement and given what Gélis terms ‘maximum play’ to the body to enable the baby to descend most efficiently. With that one common element of freedom of movement, birthing postures otherwise often reflect everyday socio-cultural actions which become incorporated into childbirth, leading to a regional distribution of birth postures. Squatting, for example, may be an everyday action which also ‘fits’ in childbirth for a number of physiological and social reasons. So if it is the custom for a woman to give birth on her own, squatting is a useful position, one in which she requires least help because she can guard her perineum herself, disengage the baby’s head herself, if that is necessary, and protect the baby as it is born from falling.

There is overwhelming evidence to indicate the physiological logic of a vertical position, while in labour and when giving birth, with important benefits for both the woman and the baby. Cultural expressions of how to achieve this physiological common sense are apparent in the responses to the question on birth position, presented in Figure 12 below:

17 For a discussion on this see Inch (1989: 118-120), Caldeyro-Barcia (1980) and Schwarcz et al. (1976).
Variants of positions with a vertical axis were reported by 32% of women (see Figure 12). The percentage order of usage reflects the location and size of the sub-samples, different customs prevailing in different communities, the all fours position being one which is favoured in Aymara-speaking areas, for example. A further 6% reported a sitting position. However, in terms of overall percentages, the so-called gynaecological or lithotomy position was the most common, affecting 93 women or 31% of the sample; 8 of these births were in the home (CIES, 1995b). The gynaecological position which is quite the most physically disadvantageous, with legs either up on leg rests or in stirrups, was the most common in the hospital setting by far, affecting 85 women of the total sample of 132. A further 35 births in hospital were in the lying down position, including 25 women who had Caesarean sections. Of the remaining 12 hospital births, 3 women gave birth on their sides, 3 in a sitting position, 1 was squatting, 1 was kneeling and 2 were in other positions.

In the ILCA sample, there were striking differences between the most rural community, Inka Katurapi, where women showed a strong preference for an all-fours position (‘de cuatro patas’) and Unkallamaya, where 16 of the 25 women chose some variant of a horizontal position. ILCA has analysed these differences in terms of language usage (see above, 8.3.4). But, given the range of benefits that women can have from a vertical position, it would be highly relevant to extend that analysis
to discover: (1) whether the birth positions favoured by women in Unkallamaya have changed within living memory and (2) how that change was construed. Is it the strong likelihood in the more accessible rural areas and peri-urban areas that the methods of western biomedicine override traditional methods on the grounds that they are ‘civilised’ and ‘modern scientific’? Is it also likely that this interpretation is further emphasised by the formal school system which reinforces this logic? The irony is that the vertical position is now being re-instituted in the western biomedical system for its benefits. In the urban Sucre sample, of 36 home births, 27 were in a vertical position and 6 in a horizontal position. 3 women were in other positions. The greatest diversity of birth positions at home was in the sub-sample of Phichichua where 12 women chose a vertical position, 2 a horizontal position, and 7 other positions.

For women with strong preferences that run counter to the biomedical preference for the gynaecological position, their encounter with hospital and posta-style birth, if it must take place, must come as a considerable shock, whatever about the loss of the physiological advantages. Here it is interesting to note that in the small hospital in Ocurí, which has set itself the task of responding to local cultural sensibilities and choices, of the 10 women interviewed, 7 women were in the gynaecological position. The researchers reported that from their small sample, they were therefore unable to confirm that the hospital has a successful policy of allowing women to adopt their own position in birth. Women reported that in general they had not been asked, when entering the delivery room, what position they wanted to use (Aguilar and Bradby, 1995a: 28).

According to the WHO Fortaleza Declaration, pregnant women should not be put into the lithotomy position during labour and delivery (WHO, 1985b).

13.4.3.4. Traditional help during labour

Figure 13 indicates the usage during labour, of the three forms of help which are core techniques in the Andean system of medicine: mates, manteos and massages in home and in hospital.

These aids were rarely available in hospital for women going to give birth there and a common pattern was for women to make use of them before leaving home for the hospital.
Figure 13 Traditional Help during Labour

*Mates* were the most popular form of self-help: 39% of women took *mates* in labour at home. However, only ten women of the 132 who gave birth in hospital were offered *mates* there. Outside the hospitals, there is an extensive range of different plants and *mates* used during labour, the differences often reflecting locality. Burning *molle* (green pepper tree) is a treatment for women in Tomaycurí to help the neck of the cervix open during labour but *molle* is also used as a *maté* in Phichichua along with *mate de miel*, honey tea (Arancibia, Platt et al., 1995a; Nina, 1995b). In the peri-urban area of Sucre, *mates* such as *perejil* (parsley), *azar t’ika* (orange blossom) and *manzanilla* (chamomile) were commonly employed. In a preliminary analysis of local patterns, ILCA concluded that there may be at least 11 different categories of *mates* which they could identify being used during pregnancy, birth and the postpartum period. The four uses they identified during labour were:

- To help alleviate the pain of contractions;
- To help accelerate the process of labour;
- To help slow down the process of labour in the home when the woman is too hot;
- To help the body recover quickly from any birth injuries in advance of those occurring.
ILCA noted the frequency with which various mates were combined and consumed together but which have different functions in relation to different requirements (ILCA, 1995b: 107).

Drinking mates is the traditional practice that appears to provoke most resistance on the part of western biomedicine. Obstetricians are especially fearful of their use during labour, fearful about their potency and how they are used to either accelerate labour, if they have oxytocic properties, or to slow it down. In respect of the former, Bolivian doctors have expressed in conversation, concern about orégano, azahar (orange blossom) and perejil (parsley) as mates which may have ill-effects. This is a profoundly under-researched area although most societies outside the west make extensive use of mates in some form or other. ILCA argues that communities have very precise techniques and dosages in mixing herbs for mates (ILCA, ibid.). Certainly the very lack of detailed evaluative studies, in the form of randomised controlled trials, means that biomedical anxieties are not being tested and therefore, it is possible that their strictures against the use of matés may even have deleterious effects by discouraging the use of a readily available form of aid. It may be worth quoting a recent assessment of local practices in West Africa in this regard:

‘Certain local practices significantly affect the course of pregnancy and labour. Some practices, though they have been little studied, appear to do good if appropriately used, such as eating herbs that contain oxytocin, which induces uterine contractions, or triggering vomiting to expel the placenta.’ (Carnegie Quarterly, 1993: 6)

It was noted in 1984, for example, in a paper reviewing traditional birth practices in Bolivia that a mate of azahar (orange blossom), is seen as a very helpful aid to deal with contractions. The review called for international organisations such as the WHO to recognise the value of traditional medicine in combating maternal morbidity and mortality (ISLA, 1984). The continuing problem is the lack of serious evaluation of existing strategies which women know and which prove invaluable in instances when women themselves or their families judge that they are in prolonged labour, for example. Hence, it is strongly urged that mates be the focus of a future detailed study (ILCA, 1995b).

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19 On the evidence about time in labour, this judgement is likely to be made in a far more conservative frame of reference than within biomedicine. It may also be important to note that the haste with which biomedicine diagnoses prolonged labour and/or inefficient uterine action is often accompanied by over-prescribing of the levels of oxytocin to accelerate a ‘slow’ labour. Parke-Davis, the leading pharmaceutical manufacturer of oxytocin, recommends that the dosage should be 1.5 milliunits per minute and should not exceed 10 milliunits per minute. Those are also recommended FDA limits in the United States. However, one of the proponents of active management of labour, Dr. Colm O’Herlihy, states that dosages begin at 6 to 40 milliunits per minute and ‘in practice, we go to 60’ (Birth, 1993, 95-97).
Both massages and *manteos* appear to be used in labour to help the baby into the most advantageous position for birth. Again there was a pattern of women who were going into hospital to give birth, utilising these techniques before going into hospital. Massages were used by 67 women at home; 6 women were offered massages in hospital. *Manteos* were used by 65 women at home with one woman being offered this in hospital.

These three were the principal forms of help but smaller percentages of women made use to varying degrees of self-help such as drinking chocolate in water or oil, steam baths, pressing on the abdomen and burning incense. Just 100 women reported walking in labour to ease the pressure of contractions. Walking, in conjunction with a vertical position during labour appears to help the sac of amniotic fluid maintain beneficial pressure on the cervix for dilatation (Inch, 1989). Women were aware that when the membranes ruptured they could usually expect the birth quite soon afterwards (Torrico, 1995b).

Some women did nothing at all. It was suggested that although women have a range of techniques which they can use, they also have a very individual interpretation of what is normal in labour which affects how they see the need to use any of these techniques, alone or in combination (ibid.). This typology of a normal birth still requires extensive exploration.

13.4.3.5 Problems during labour

Probably the most hotly contested aspect of obstetric teaching is that every birth is a normal birth only in retrospect. If we accept the argument that in 9% to 15% of all births, there will be a necessity for hospital and/or emergency treatment, can we conclude that otherwise 85% of women may face some difficulty, minor problems or none at all?

This question is at the heart of the matter in respect of the project. What kinds of problems have women faced in labour which might have jeopardised the lives of their own lives or the lives of their babies? What is the evidence from the questionnaires? Figure 14 shows the problems women reported during labour.

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20 Walking was generally seen to be useful during pregnancy; women walk so that they will have easier labours (Arnold and Yapita, 1994; Torrico, 1995).
The first category to take note of is that 21% of women said they had no problem at all in labour. In terms of maternal morbidity and mortality, there are four potentially serious problems listed, if considered in the frame of reference of obstetric medicine:

- **sangrado fuerte**/strong bleeding - 22%
- **hinchazón**/oedema - 21%
- **wawa trancada**/lying crossways - 13%
- breech presentation or hand presentation - 9%

In fact these categories do not have a strict correspondence with western obstetric categories. Antepartum haemorrhage, as noted above in Chapter 11.2.1, occurs in approximately 3% of all pregnancies, in the sense of blood loss great enough to threaten the life of either mother or child. In the Andean context, ‘sangrado fuerte’ appears to be some show of blood which points to a difficult labour. It seems that the nature of this labour as a difficult labour is of a different order altogether to how obstetric medicine sees haemorrhage as difficult. This is not to say that antepartum haemorrhage of the very serious types is not included in the reported 22%. Both placenta praevia and placental abruption are known to have an increased incidence in older women of greater parity (Cunningham, 1993: 827). But the overall rate of occurrence is still not likely to be far above that 3%. It may also be that the identification of ‘sangrado fuerte’
is more readily applied by younger first-time mothers who are less sure of themselves in the birth process and less sure of what they are seeing. ILCA observed that first-time mothers, especially in Inka Katurapi, were reporting ‘sangrado fuerte’. In contrast the combined Sucre teams found that women with 7 or more children were over-represented among those reporting ‘sangrado fuerte’. But these possibilities can only be seen in the larger frame of reference about blood in the reproductive cycle; rural women give great importance to the quantity of blood loss, during their periods and during childbirth. Many women may see blood loss as a way to cleanse the body of ‘sangre sucia’ or unclean blood after it has carried out the important function of helping the baby to grow and be born (CIAES, 1991: 19). The importance of blood is part of a much larger system of classification in which a biomedical use of blood loss as dangerous is simply confusing (ILCA, 1995b: 6).

Although oedema was reported by more than 1 in 5 women, it does not appear to be considered a great problem. Of course, it cannot be taken as an indication of pre-eclampsia or eclampsia on its own in any case.\footnote{In the Bolivian Andes, oedema does not have the gender-specific connotation that it has in parts of west Africa, for example, where it is taken to be a sign of infidelity and thus is better concealed and ignored (Carnegie Quarterly, 1993: 6). Local contextual information like this about the absence or presence of ascribed socio-cultural meanings have a bearing on the policies to incorporate women into state health systems. These policies are often based on the assumption that women will be unable or unwilling to recognise what is dangerous because of ascribed socio-cultural meanings, like infidelity. Health planners conclude therefore that women must be incorporated into state health systems to prevent them from being exposed to danger as a result of the way people respond to these beliefs. But the substantive challenge is for health planning systems to respond to and work along with local perceptions, not to override them. In the context of this project, for example, where great emphasis is placed on having the baby in the right position, a breech birth is thought to be the result of putting kindling in the fire back to front, in the Qaqachaka community and also because a woman has used ‘bad language’ But the fact that such a birth can be difficult and even dangerous is acknowledged (Arnold and Yapa ita, 1994: 57-8). The biomedical system has the opportunity it work alongside these perceptions and to support local knowledges in how they deal with breech births — often with skilled massage and manual intervention as with lambs, to strengthen beneficial practices rather than to discredit all local practices, without any evaluation. See also Chapter 10.3 and this Chapter, 13.4.2.1.}

The reported instances of a baby in a crossed or transverse position and in a breech position are again difficult to interpret. Is it that women are very acutely sensitive to a malposition and can feel the difference if a baby is posterior just prior to and during early labour? That might certainly account for a reported occurrence as high as 13% of ‘wawa trancada’ if that also included babies in a transverse position, given that the latter occurrence, though not very common, is certainly related to age and higher parity. The reported instances of breech or hand presentation are also puzzling being greater than the statistical occurrence of these problems. It does not seem that they can be accounted for in terms of increasing age and parity as such. All that can be said definitively is that none of these reported instances apparently proved life-threatening (in the 4 reported instances in Phichichua, for example, none of these 4 women reported ‘sobreparto’ or

\footnote{In the Bolivian Andes, oedema does not have the gender-specific connotation that it has in parts of west Africa, for example, where it is taken to be a sign of infidelity and thus is better concealed and ignored (Carnegie Quarterly, 1993: 6). Local contextual information like this about the absence or presence of ascribed socio-cultural meanings have a bearing on the policies to incorporate women into state health systems. These policies are often based on the assumption that women will be unable or unwilling to recognise what is dangerous because of ascribed socio-cultural meanings, like infidelity. Health planners conclude therefore that women must be incorporated into state health systems to prevent them from being exposed to danger as a result of the way people respond to these beliefs. But the substantive challenge is for health planning systems to respond to and work along with local perceptions, not to override them. In the context of this project, for example, where great emphasis is placed on having the baby in the right position, a breech birth is thought to be the result of putting kindling in the fire back to front, in the Qaqachaka community and also because a woman has used ‘bad language’ But the fact that such a birth can be difficult and even dangerous is acknowledged (Arnold and Yapita, 1994: 57-8). The biomedical system has the opportunity it work alongside these perceptions and to support local knowledges in how they deal with breech births — often with skilled massage and manual intervention as with lambs, to strengthen beneficial practices rather than to discredit all local practices, without any evaluation. See also Chapter 10.3 and this Chapter, 13.4.2.1.}
infection as a postpartum complication). Indeed, women did not necessarily feed that they needed help to deal with these malpositions or malpresentations. But when they did seek help, they apparently used effectively the traditional techniques of *manteos* and massages.

The single greatest reported problem in birth was ‘frío’, cold, with 136 cases, almost 46% of the total sample. This response cannot be seen separately from the typology of the hot and cold body in the Andean cultural system. Keeping the body warm is one of the primary strategies women can use to encourage a strong pattern of labour, often using *mates* to warm the body (ILCA, 1995b; Torrico, 1995a; Torrico, 1995b) and reflects the important insight that muscles work better when warm than when cold. Of those giving birth at home, 53.4% reported suffering from ‘frío’. The reported percentage amongst hospital births was somewhat higher at 56.8%. The next most common problem was ‘susto’ or fear, reported by 30% of the sample. Reviewed by both interview site and place of birth, women in all sites reported these problems but whereas women in their own homes were free to act either to prevent their arising or to deal with them if they did, women in hospitals did not have that freedom. Women in hospitals, as we have seen above, were rarely able to avail themselves of traditional aids during their labour. Yet it was clear from fieldwork notes that maternity units such as the IPTK hospital in Ocurí and Lajastambo (Sucre) were very cold, even for visitors. The problem is that the 12 hour rule about the length of labour hovers over women giving birth in hospital where there is ready recourse to interventions such as injections and intravenous oxytocic solutions to deal with what is termed ‘inefficient uterine action’, which may itself derive from the problem of asking women to labour when they are shaking with cold. It seems but common sense that biomedical authorities should make it possible for women to deal with the problem of cold and fear in hospital by using the non-biomedical strategies which they employ outside hospital, most especially when these aids will support a woman to have a steady strong pattern of labour.

13.4.3.6 Biomedical interventions in labour

Of the 132 hospital births and the 4 births attended at home by biomedical personnel, just 76% of the respondents reported at least one medical intervention (see Figure 15). We are here defining ‘intervention’ as a form of pharmacological or surgical or instrumental technology. One of ILCA’s interviewees in Inka Katurapi was given an intravenous drip, an injection and had forceps applied to her during her birth during the intervention of a visiting North American doctor who presented himself to assist her at home in her labour.
Figure 15 Types of Biomedical Interventions Reported

There are problems with this information. We do not know, from the questionnaire replies why any of these interventions was deemed necessary from the viewpoint of the hospital or biomedical staff. What we can say here is that tablets and injections would be administered for three possible reasons: to relax a ‘rigid uterus’ during labour (as this practice was described in the main maternity unit in Sucre), to prevent haemorrhage with ergometrine as part of third stage management practices; and finally, to counter infection with antibiotics.

In the case of the intravenous drip, there were four possible purposes: induction and/or acceleration of labour with an oxytocic agent; an oxytocic agent to hasten the delivery of the placenta; fluid replacement and blood transfusion. Somewhat different patterns of intervention emerge by interview site reflecting different hospital policies. For example, just over half of the women in the CIES sub-sample were given an intravenous drip, along with 8 of the 12 hospital births in the ILCA sample, and 37.5% of the women from the combined Sucre teams.

In total, 47 women reported being given the drips before they gave birth and 13 women reported receiving the intravenous drip after birth. One of the 13 was given a transfusion to replace lost blood, four hours after the baby was born (ILCA, 1995b: 30). The majority of those who had the drip administered before birth were told that the drip was to help facilitate the birth of the baby (CIES, 1995b: 12). We are

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22 One of these women had an intravenous drip at home which was administered by a visiting North American doctor.
making the assumption that those 47 women were given an oxytocic agent in their intravenous drip, giving a rate of induction/acceleration of labour of 35.6% of all births in hospital. Induction of labour is not a common policy, not least because rural and migrant women are not accustomed to presenting themselves at the door of the hospital for the antenatal checks which would be necessary in order to initiate an induced labour. Therefore the further assumption is that almost all of these 47 births were accelerated labours.\(^{23}\)

The rationales for accelerating labour are bound up with the overlapping notions about inefficient uterine action, how prolonged labour as a result of inefficient uterine action can be defined, and whether labour should be allowed to go over 12 hours. The logic of these arguments will be discussed in Chapter 14 when hospital policies and practices are reviewed. What is important to state at this point is that although intravenous oxytocic agents are the most common mechanism for accelerating labours, evaluations of their use do not bear out the benefits of acceleration as a widespread practice. The ‘active management’ school of labour (O’Driscoll and Meagher, 1986; O’Driscoll, Meagher and Boylan, 1993) has argued that intervention with oxytocic augmentation at an early point in labour, as measured by the partograph or partogram, will reduce the number of women who require Caesarean section, will reduce foetal distress and neonatal morbidity, and will possibly reduce the numbers of babies born with cerebral palsy. These claims have all arisen on the basis of uncontrolled trials and the team which has collaborated to produce the Cochrane data base notes that there has been no demonstration to date, of the validity of these claims, with published results of controlled trials (Enkin et al., 1995: 266). Enkin and his colleagues argue that it does not appear that the liberal use of oxytocic augmentation is of any benefit to women and their babies and that approximately half of the women who are judged by criteria such as the partogram, to have a slow labour will progress equally well with or without the administration of oxytocic drugs (Enkin et al., ibid.). There are also drawbacks and disadvantages of oxytocic augmentation, including decreased mobility for the woman, increased physical stress due to the pattern of contractions and, most seriously, the increased tendency to postpartum haemorrhage (Cunningham et al., 1993: 616).

Turning to the figures on episiotomy, this intervention was employed on 25.75% of women. By sub-sample, the use was most liberal in the maternity units in urban Sucre and the CIES group of interviewees. It is claimed that routine use of episiotomy will prevent damage to the anal sphincter as a result of uncontrolled tearing, damage to the foetal

\(^{23}\) One of the Sucre births was a case of induction; the woman in question was diagnosed as carrying a dead foetus when she arrived at the maternity unit and her birth was then induced.
Reducing maternal mortality and morbidity in Bolivia

head, and damage to the muscles of the pelvic floor as well as being easier to repair than tears. The efficacy of episiotomy in respect of any of these claims has not been tested in adequate controlled trials but it is clear that liberal use of episiotomy is associated with higher overall rates of perineal trauma (Enkin et al., 1995: 232). Research on women’s experiences of episiotomy has indicated that women who have had episiotomies have experienced more pain at the end of the first week after birth than women who have torn. Problems with stitches ripping out, breakdown of the perineal repair, long-term effects of infection, pain, and scar tissue are much more common among those women who receive episiotomies (Kitzinger, 1981). Because it is a surgical procedure, it also carries the risks of excessive blood loss and haematoma formation, as well as perineal abscess, rectovaginal fistulae and loss of rectal tone (Enkin et al., 1995: 231). A further drawback to its use is that it deprives the woman of another release mechanism for physiologically-produced oxytocin which plays such a significant role in the delivery of the placenta (see also Chapter 11, Footnote 39). In other words, the routine use of episiotomy cannot be justified. Hospital policies of enforcing the gynaecological position for birth and the use of episiotomy as a direct consequence of that birth position is explored in Chapter 14. Here it is sufficient to note that episiotomy was not limited to first-time mothers by any means and that its use increased the physical trauma of birth. We can postulate that there are other sequelae as well. The notions of vaginal examination, let alone incising perineal tissue, are procedures alien to rural women and are highly unlikely to give them confidence in state health care services. Women reported that vaginal examinations ‘weakened’ them, for example (Torrico, 1995b). ILCA reported one woman with a severe infection as a result of an episiotomy (ILCA, 1995b: 22). Yet another aspect of the use of episiotomy is the increased sense of alienation and shame it entails for women in a cultural context where modesty in relation to exposing the genital parts of the female body is observed during birth at home.

The WHO Fortaleza Declaration states that the systematic use of episiotomy in labour is not justified and that alternative methods of guarding the perineum should be used (WHO, 1985b).

The use of forceps in labour is rare in the maternity units which our interviewees attended. However, Caesarean section is a fairly commonplace procedure. The rate of Caesarean sections, at 18.93%, was not bad in the context of some private maternities in Bolivia where the rates have been above 25%. It is as a result of high rates and lack of clearcut criteria that Plan Vida has set a limit on this intervention not to exceed 15% (see Chapter 9.5 above). However, there are two queries about the rate amongst our interviewees. Firstly, is this comparatively low incidence linked to the expense of
Caesarean section for patients, such as the women we interviewed, who do not have any form of social insurance through the state for their hospital care? There is definite evidence to link higher socio-economic position with a higher rate of Caesareans both generally in Latin America and at the local level of the fieldwork sites in Bolivia, where a comparison of rates of section from the Hospital de la Mujer in Sucre by socio-economic group indicates that women who can pay are more frequently recipients of this form of intervention (Wagner, 1994:180; Aguilar and Bradby, 1995a: 40-42). Secondly, how are the coherent biomedical criteria for performing a Caesarean section, called for in Plan Vida, going to be drawn up? Firm indications for Caesarean section are placenta praevia, premature separation of the placenta, transverse lie, certain instances of prematurity, established eclampsia and pathologically small pelvic outlet (which can be established through anthropometry). There is no study indicating the benefits of operative delivery for a baby in the breech position over a skilled manual delivery (Wagner, 1994: 181-182; Enkin et al., 1995: 319). Previous Caesarean section as an indication for further Caesarean section is only an issue if a full classical section with a vertical uterine scar is performed as distinct from a lower segment operation which entails far less physical trauma to the uterus itself (Cunningham et al., 1993: 546). The collaborators on the Cochrane database comment about the contentious issue of the rate of Caesareans that the extent to which obstetricians differ in their use shows their great uncertainty about clinical indicators and suggests that other criteria, social, legal and financial enter it too frequently (Enkin et al., 1995: 319).

What is not so often stated in the debates about Caesarean section is that the risk of a woman dying as a result of a Caesarean section is 4 times higher than with a vaginal delivery. A woman also faces serious problems of morbidity, including infection, damage to uterine blood vessels, damage to the urinary bladder, and anaesthetic accidents (Wagner, 1994:184). In the course of fieldwork in Sucre, one woman interviewee was extremely distressed at having been given a Caesarean section for her first birth. She was told it was because the baby could not be born without the section. She was only temporarily in Sucre, was returning to the campo once she had recovered. She stated unequivocally that if she had been at home when she had gone into labour, Andean techniques such as the manteo would have helped her give birth. There was genuine apprehension amongst rural and migrant women about the way Caesarean section weakened their bodies, which is unsurprising given that the full classical Caesarean section appeared to be the most usual procedure (Murphy-Lawless, 1995; Torrico, 1995a). ILCA had one instance of a woman with a transverse presentation when she came to the hospital who had an emergency Caesarean section. The woman was in poor condition, suffering from malnutrition and anaemia. The site of the incision was
infected in the wake of the operation (ILCA, 1995b: 21). Policies and practices on the use of the Caesarean section in hospitals which were part of the fieldwork will be reviewed in Chapter 14.

The WHO Fortaleza Declaration states that the countries with the lowest perinatal mortality rates in the world all have rates of Caesarean section below 10% and that there is no justification in any specific geographic region to have a Caesarean section rate of more than 10-15% of all births (WHO, 1985b).

In summarising the extent of medical interventions, it must be noted that the potentially serious problems women reported were not that many in number. ILCA, for one, does have self-reported details from one woman of a serious instance of a transverse lie.\(^{24}\) But we have no way of quantifying the actual seriousness of women’s circumstances which led to their having either accelerated labours or Caesarean sections and this is due to the lack of clearcut criteria in hospital practices. Nevertheless, the extent of these medical interventions seems unwarranted, especially in the light of the estimate that only 9% to 15% of women will need obstetric facilities to deal with serious complications. If anything, rather than dealing with actual serious hazards in labour, the routine application of biomedical interventions was far more likely to contribute to women’s physical trauma and discomfort, with complications such as infections and fever arising from the interventions themselves. This is an issue which requires further investigation. It is of special concern that acceleration of labour with oxytocic agents is so commonplace, especially given the impact of this practice in relation to the increased incidence of postpartum haemorrhage. It is also of concern that the vertical position in birth is denied to women in hospitals, leading to an unnecessary longer second stage labour and routine practice of episiotomy.

13.4.3.7 Delivery of the placenta and postpartum problems

In Chapter 11.2, a series of related techniques and procedures were put forward as part of the physiological management of the third stage. The importance of physiological methods is to do with the prevention of postpartum haemorrhage, the single greatest cause for women’s deaths in childbirth. In this section, data is presented on aspects of placental delivery and reference will be made to the separate elements of this package. Also a list of current Andean practices outside the hospital for delivering the placenta is considered.

\(^{24}\) Of course, emergencies do occur in hospital settings. During initial exploratory fieldwork in one of the Sucre hospitals, a woman was interviewed who had an emergency Caesarean section because of haemorrhage from a placenta praevia. This had gone undiagnosed in an antenatal check in the same hospital nine days previously (Murphy-Lawless, Fieldwork Notes, 4th April, 1995).
Although there was a greater diversity of positions for placental delivery, the single most common one, the gynaecological position, was how 93 women delivered the placenta and reflects hospital policy. With the legs stretching upwards on rests or in stirrups, this position is the least helpful from the viewpoint of the physiological package (see Figure 16). The element of a vertical axis for the body, so that gravity helps the placenta peel off, is lacking. Around 19% of the whole sample reported that they employed a position with a vertical axis. On the other hand, women used a supine or semi-supine position somewhat more in delivering the placenta at home than for actually giving birth to the baby. What has been suggested is that if the placenta does not come away immediately after the baby is born, a strategy of resting, keeping warm and waiting for the placenta often comes into play. Because of the emphasis on a warm body in the Andean ethnophysiology, a supine position where a woman can be easily kept warm while she is waiting, may be more in evidence. This tranquil waiting state is known in Quechua as ‘winkusqa’ (see Torrico, 1995b) and the approach highlights the other drawback to the gynaecological position in hospital, which is that it is very likely for women to be cold throughout their labour in the hospital, including the period of placental delivery. This may well impact them adversely if there is a delay in placental delivery.
Arguably the most critical element in the physiological package of the third stage is the time at which the cord is cut, followed by when the baby is put to the breast (see also Chapter 11.2 above). Figures 17 and 18 (p. 340) show the responses to when the cord is cut and when the baby is put to the breast. The proponents of the physiological package argue that cutting the cord before delivery completely disrupts the distribution of blood volume between mother and baby, depriving the woman of maximum benefit in helping the placenta to peel off the uterine wall. Botha (1968) argues that the practice of cord-cutting was not known amongst Bantu people before the arrival of western biomedicine and therefore the problem of retained placenta was not encountered. However, once early cord-cutting was introduced, the incidence of retained placenta and of postpartum haemorrhage became significant factors in maternal health. In other words, early cord-cutting and clamping leads to a longer third stage and greater blood loss (ibid.: 32-33) and therefore makes it vital that an oxytocic drug be used to deal with the effects of this disruption to prevent the incidence of PPH and retained placenta to which it contributes.

25 This presupposes that a physiological third stage is possible because it follows on from a physiological first and second stage. Oxytocin, given to either induce or accelerate a labour, will impact on the capacity of the uterus to fully contract and expel the placenta, leading to higher rates of PPH, unless a woman is further supported by an oxytocic agent to counter the impact of the initial oxytocic infusion during labour (Inch, 1990: 8-9).
Although 28% of women reported the cord being cut after the placenta was delivered, the majority of women reported having it cut before the placenta was delivered, 60%. There appear to be two separate foci for why this happens. One is the biomedical practice. Hospital births were virtually uniform in cutting the cord beforehand, unsurprising as there are strict policies about the third stage with time limits and/or immediate interventions in the form of oxytocic agents. Both these practices prejudice outcomes for women in the third stage and it should be pointed out that the routine administration of ergometrine to prevent haemorrhage actually leads to an increase in the rates of secondary postpartum haemorrhage for women which will occur most likely after they have been discharged from hospital (see Chapter 11.2 above).

A second distinctive focus emerged in births at home, where one of the common patterns is to give birth to the baby, then to have the husband or some other family member come and cut the cord, lifting the baby out of the way and then return to tie her woven belt around her middle after she has given birth, to help the placenta be delivered. An additional practice around the cord is to tie it to the woman’s right big toe with thread, once it has been cut, whereby she can do a sort of controlled cord traction, if necessary, to help the placenta be delivered.

But this was not a uniform practice. In the rural sites of Phichichua, there were 4 cases of the cord being cut after the placenta was delivered and one woman replied about this, that it is said one can die if the cord is cut before the placenta is delivered (‘decía que pueden morir si cortan antes la placenta’, Arancibia, Platt et al., 1995a: 22). ILCA also found in Inka Katurapi that the most common practice was to cut the cord after the placenta had been delivered, although if the placenta was not expelled rapidly, the cord might be cut beforehand. There appears to be an established practice of older, experienced women teaching first-time mothers to wait to cut the cord until after placental delivery. While it is not clear what are the origins of this practice, ILCA comments that it is also the custom in the frontier region of Charaña in the province of Pacajes (ILCA, 1995b: 85).

Although there was some small variation in practice about cord-cutting, the overwhelming majority of women, 86% put the baby to the breast after the placenta was delivered as indicated by Figure 18.
Figure 18  Placental Delivery and Putting Baby to the Breast

In the case of hospital births, the practice is related to the biomedical focus on an active management of the third stage. But the concentration on active management techniques may be further reinforced by levels of misinformation about breastfeeding, including unduly long periods of separation of mother and child after birth (Bartos et al., 1992: 43). The combination of factors leading to non-usage of immediate breastfeeding deprives women of the oxytocic impact that can prove helpful in aiding the delivery of the placenta. Outside the hospital, women also lose the benefits of oxytocic release from immediate breastfeeding. In the campo, the firm practice predominates of not giving the baby the breast to discourage babies from crying and demanding food, a practice which has substantial rationality for many women in their individual circumstances (Arnold and Yapita, 1994: 43; ILCA, 1995a; Bartos et al., 1992: 27).

How long do women wait for the placenta? Figure 19 presents the data on how long women waited before the placenta was delivered.
Policies about active management of the third stage are clearly reflected in the hospital figures where only 6 women reported a delivery time outside a half-hour time limit. The difference between more women proportionately, 55, delivering the placenta in hospital at once and 48 women at home delivering at once is most probably explained by the effects of active management policies of the various maternity units and perhaps by women not being so aware of the placental delivery because the issue was out of their control anyhow. Although ergometrine or other oxytocic agents appear to be given most usually after the placenta has been expelled, it was clear that many women in hospital were subject to abdominal rubbing, often forcibly and causing great pain, to achieve rapid delivery of the placenta (see also Figure 20, below, on assistance to help deliver the placenta). Of the women who gave birth at home, 81% delivered the placenta within an hour of the baby’s birth and an additional 11.4% within several hours.

The group of 10 women who took a day or more to deliver the placenta are of special importance to this project in respect of the problems of retained placenta and postpartum haemorrhage. Before looking at such cases in detail, data on help to deliver the placenta is presented below in Figure 20.
Women used nothing, one, or a number of different techniques to help with the placenta; the range of possible strategies they used appeared to be based on family and local customs across the interview sites as much as on the passage of time. The inclusion of ‘other’ elicited responses such as using a wooden spoon down the throat to make a woman gag and exert pressure on the diaphragm. A third of women respondents did nothing to assist placental delivery although this was not necessarily because of the immediate delivery of the placenta. Tying the woven belt around a woman’s waist, a task of someone who comes in to assist the woman once the baby has been born, accounted for 16% of respondents overall. This last is a very traditional practice. Every woman in the sub-sample of Tomaycuri had her woven belt tied round her waist in the belief that if she did not, she would risk dying because the placenta might go back up towards the top of the womb (Torrico, 1995b). The very small number of women who reported doing belt-tying in the CIES sub-sample contrasted with what appeared almost a routine practice of doing so amongst women they interviewed during the qualitative phase. The team does not know why it did not feature in the quantitative phase (CIES, 1995b: 11).

Rubbing or stroking the abdomen was used by 14% of women. 9% of women reported that they had experienced rubbing with force on the abdomen, to the point where it was painful, to make the uterus contract. ‘Rubbing up a contraction’ is a practice with a long history in western biomedicine where getting the placenta out quickly has been seen to be of optimum importance. As discussed above in Chapter 11.2, interference in the third stage is likely to create the very problems that it was intended to avoid.
Nonetheless, ‘fundal fiddling’, on a continuum from rubbing to the very painful and potentially dangerous practice of manual compression, known as Credé’s method, has been hospital routine for many generations of practitioners.\textsuperscript{26} While bi-manual compression can be life-saving in the case of actual haemorrhage, to use any force on the uterus, before delivery of the placenta, is counter-productive (Inch, 1989) and, as in the instances reported by women who gave birth in hospital, very painful (Aguilar and Bradby, 1995). Cunningham et al. (1993: 616) note that fundal pressure of this nature, where there is kneading or squeezing of an already contracted uterus impedes the process of placental detachment, leading to incomplete separation of the placenta and increased blood loss.

The single most common response of women across all teams, if they felt they needed assistance, was to use mates. ILCA noted that the same mates used to help birth were also used to help with the placenta although by no means as frequently. It was also a more rural, rather than an urban practice (ILCA, 1995b:103). CIES on the other hand, found that 16 women in its 30 home births in El Alto used mates. Given that failure of the uterus to contract is responsible for 90\% of postpartum haemorrhages (Hibbard, 1988:677), even though it cannot be predicted who will be at risk, it is essential to know which mates are most beneficial in helping the uterus if there is a problem with the placenta.

But mates will not be the only recourse if there is a lengthy delay. The combined Sucre teams looked in detail at eight women who waited for the placenta a day or more. These eight women reported the following strategies:

- woman with first child: nothing
- woman with first child: nothing
- woman with third child: mates and wooden spoon
- woman with fourth child: mate (paroleza)
- woman with fifth child: strong mates
- woman with fifth child: tying woven belt and mates (coca, q’uwa and molle)
- woman with seventh child: mate (molle)
- woman with ninth child: massage, rubbing with force, manipulation

(TCD/TIFAP/St. Andrew’s, 1995: 37).

\textsuperscript{26} Fundal pressure to bring about a quick delivery of the baby, although less common than fundal pressure for placental delivery, remains a biomedical practice in western hospitals, despite evidence as to the damage entailed. See Inch, 1989.
Therefore, approaches to dealing with retained placenta were far from uniform. Two of these women said they had no postpartum problems, despite what is considered too long a wait in obstetric medicine.\footnote{One of the researchers made the point that 24 hours is not considered too long to wait among the women she interviewed in Tomaycuri (Torrico, 1995b). She also observed that pulling out the placenta is a notion that inspires fear in the women of Tomaycuri because they believe it will destroy the woman’s uterus (Personal communication, Cassandra Torrico).} Three reported haemorrhages (one a first-time mother, one with a parity of 5 children, one with a parity of 9); one first-time mother reported pains in the belly for a month afterwards; the second grand multiparous woman reported sobreparto (infection), hinchazón (oedema) in her toes for a month, and pain in her head; one woman reported sajt’ay (the feared and believed to be nearly always fatal affliction, involving some infectious process, in which a woman’s blood, in her vulnerable body immediately after birth, becomes a focus for a malignant attack. Great care must be taken of the woman immediately following the birth and for 2-3 days afterwards to guard her against sajt’ay — see Arancibia, 1995). We do not know if any of these women proceeded first to use gentle cord traction with their toes as soon as the cord was cut. Two women only recorded putting the baby to the breast before the placenta was delivered. One reported no symptoms and no haemorrhage afterwards. She had a parity of four and took mates to help the placenta. The other woman was the one with seven children. Those two had the benefits of oxytocic release as a result of putting the baby to the breast.

These outcomes underscore the problem of predicting the incidence of retained placenta and its effects in terms of parity, management and consequent symptoms. But it also suggests that there are possible preventative factors at work which ensured either that these women did not haemorrhage or that their haemorrhages were not life-threatening. What is needed is a very fine-grained study of a group of women in these circumstances to see if it is possible to locate what are the factors which have protected them.

ILCA reported one woman in their urban sample who went to the hospital after a week with retention of the placenta and infection. Her baby had died in the womb. She was given a total hysterectomy and was being treated for complications to the urinary tract (ILCA, 1995b: 21).

A provisional typology of practices around the placenta appears to include the following elements: cutting the cord, attaching the cord with a thread to her big toe, and using a stroking motion down along the abdomen while tugging gently with the toe. If the placenta fails to be expelled with these methods, others, such as forcing one’s hand down one’s throat to produce pressure on the diaphragm, or blowing on a bottle or using a wooden
spoon to depress the throat to produce the same action, are used. Unguents such as *grasa de gallina* (chicken fat) can be rubbed on the abdomen and mates taken. The mother can be given rough grains to eat, and cataplasms or poultices for her back, for example those made of soot and salt or hot mud, can also be used (although there was no report of their use in the questionnaire data but see Arnold and Yapita, 1994: 39). Any or all of these can follow after an initial practice of tying the woven belt tightly round the waist after birth. There is an acute awareness that if the placenta re-enters or goes up in the body, a woman is in grave danger (see for example, Arnold and Yapita, 1994: 39 and Torrico, 1995b: 13).

Perhaps the most intriguing data on practices with the placenta is the divergence that ILCA noted among women in Inka Katurapi from the more usual custom of cutting the cord after delivery of the placenta, rather than before. There was no report from any of these women of their waiting longer than one hour for the placenta to be expelled. If the proponents of the physiological method of management are correct about the distribution of blood volume, then not cutting the cord (something recommended by Araújo in Fortaleza) could be a crucial practice for women in order to avoid retained placentas.

![Figure 21 Postpartum Problems](image)

46% of women reported that they had no postpartum problems (see Figure 21). The single most common symptom was reported as haemorrhage. But all the teams indicated that there was a major difficulty in dealing with the meanings of blood loss and its quantities, for what is customary for the woman may not be acceptable at all to biomedicine. Yet women themselves have a category of blood loss that they do recognise as dangerous and as a
cause for maternal mortality (Arnold and Yapita, 1994: 40). The questionnaire itself was unable to pin down in sufficient detail the differences between what was considered a healthy loss of blood, possibly related to the need to ‘clean the blood’, and a serious loss of blood as women themselves perceive it. In Phichichua, one woman who reported what she classed as a dangerous loss of blood, went to the local posta. The woman was extremely concerned to protect herself from sajt’ay. Another woman in this sub-group reported a strong haemorrhage and pains in the belly but dealt with it by taking a mate of ‘sulta sulta’ (Arancibia, Platt et al., 1995a: 25).

The potentially serious problem of infection (‘sobreparto’) was reported by 42 women, including 2 where it was definitely attributable to interventions in the hospital (ILCA, 1995b: 21-22). Infection may overlap with other serious problems, such as ‘sajit’ay’. This latter is a complex affliction of malign forces which has bodily symptoms and points to women’s immense vulnerability in the period after birth. It is considered absolutely dangerous and was reported by 6%. Infection may also overlap with retained placenta which was experienced by only a minority of women. In the case of one woman, retained placenta and infection were treated through hospitalisation. Otherwise retained placenta was resolved at home. Infection is unlikely to encompass any bacteria introduced through the vagina by birth attendants, for with the exception of extreme circumstances, this does not happen. It is essential that National Secretariat of Health personnel are aware of this distinction when considering ‘parto limpio’. From earlier work on the project, we know that herbal mates play a central role in the treatment of fevers which accompany ‘sobreparto’ and that there are herbal mates specifically for uterine infections (Arnold and Yapita, 1994: 41). Mates were reported being used in the postpartum period to clean and disinfect the body and so help avoid infection (ILCA, 1995b: 101).

13.4.3.8 Customs around birth: asking for the placenta, special food after the birth and rest and washing after the birth

The significance of the placenta for the family of a newborn child in Andean tradition, and the requirement of burying it, was not taken on board by hospital authorities. In the 132 hospital births, 56 women asked for the placenta but only 20 were given the placenta. It was noted that some women might think about asking only in retrospect for on the whole it was difficult to raise the issue in a setting where the women felt barely tolerated. Nine of the 10 women who gave birth in the hospital in Ocurí asked for the placenta; 8 were given it. This hospital has said that its policy is to be open to the needs and traditional beliefs of rural women (Aguilar and Bradby, 1995a). It is not difficult for state health care personnel to reorient themselves to other ways
of treating the placenta, so that, as Koblinsky has noted, even women giving birth in hospital will have that reassurance about their essential beliefs and have respect accorded to them:

‘Many traditions could be adapted by health services with few difficulties and major pay-offs. For example, in Cochabamba, women did not want hospital deliveries because they could not retrieve the placenta, the burial of which is thought to be vital to ensuring a good start for the baby. Some hospitals in Cochabamba now provide the placenta to the families’ (1995b: S3).

After the woman has given birth, there is an emphasis on special foods, *mates* and chocolate to help her recover her strength and cleanse her blood (see Figure 22).

![Figure 22 Special Diet after Birth](image)

Three quarters of the sample had broths, 52% took *mates*, 28% took chocolate (as a drink, similar to cocoa), 25% had ‘*comida blanca*’ while 24% used other foods. The entirely urban sub-sample from CIES appeared to be most committed to provision of special food at this time. There is a problem with the 28 women interviewed in hospitals after giving birth in Sucre because they were almost entirely dependent on hospital food which did not permit them to exercise personal preferences. A few women indicated that they were waiting on family members to bring them food in hospital to supplement what were scanty portions of food with indifferent nutritional value provided by the hospitals.

The teams differed in their approach to questions on bed rest and washing after birth. CIES coded these as closed questions with their urban sample and had the following
responses: 59 women or 78% of their sample were in bed after birth from 1 to 8 days; 17% were in bed from 9 to 15 days and 5% spent more than 15 days in bed. 51 women first washed themselves between 1 and 8 days after birth; 14 women waited between 9 and 15 days; 11 women waited 15 days or more.

These questions were left open-ended by ILCA and the combined Sucre teams. The majority of women who gave birth at home rested from 1 day to one week, with some women resting longer and a very few less than a day. A distinction between rest and bedrest was made in Tomaycurí where women might remain in bed for a couple of days to a week and then resume some household chores but not the heavy work of fetching water, cooking and tending the herds. Women giving birth in hospital appeared to average a two-day stay in bed before going home.

Women who gave birth in hospital or in the postas washed themselves immediately after birth. For those women giving birth at home, they appeared to take more time before they washed than before they got out of bed. The responses on washing ranged from 1-2 days to one month. ILCA observes that washing in the home was done when the home was made warm enough for the woman, not as in the hospital where there was no attention to the problem of cold at all.

Women in Tomaycurí did not wash the genital area until they stopped bleeding. They believe that to do so before bleeding has stopped is to run the risk of infertility. By not washing until bleeding has stopped, they also remove a risk of infection. Washing not with plain lukewarm water, but with agua de chuño (dehydrated potato water) and rosemary was mentioned in Phichichua, the rosemary having antiseptic properties. A usual pattern was to wash the head, hands and feet but not the rest of the body (Arancibia, Platt et al., 1995a; Torrico, 1995b).

The attention that women who have given birth at home subsequently give to washing when they are warm, to avoid the genital area until it is safe, to using herbs which have antiseptic and healing properties, stands in marked contrast to hospital regimes where the importance of heat and cold are not considered, and where women are asked to take on methods which run counter to their own modes of guarding themselves with care.
13.4.3.9 Desired place of birth

Figure 23 shows the data on the desired place of birth. Of the entire sample of 298 women, 62% wanted to give birth at home while 38% wanted to give birth in hospital. Looked at by place of last birth, 90% of those who gave birth at home preferred to give birth at home while 10% of the women who gave birth at home wanted to give birth in hospital. Of the 132 women who gave birth in hospital, 71% wanted to give birth in hospital, while 29% wanted to give birth at home.

Inevitably, the simple question, where would you prefer to give birth?, is insufficient to cover all the reasons why women are making different choices; there was room for open-ended comments as well. In the entirely urban sample of CIES, some women spoke of giving birth at home for economic reasons, the costs of a hospital birth being beyond their means. But far more commonly the replies were about hospital policies and practices: the cold, bad treatment, nurses treating women badly, fear of doctors, being made to feel shame, having bad experiences in the past, harming women, not healing rapidly in hospital — these were some of the negative reasons that CIES found among its interviewees who had given birth at home. Women associated home with a sense of security and tranquillity: one is always better in one’s own home, because there is no anxiety about where to leave the children, because one knows the people who come to help, it is with the family, one has the advice and support of one’s mother, because there is no cold. In brief, a lack of economic resources, a fear of medical doctors, the lack of beneficial attention in hospital, the feeling
that one is more secure at home and not having to deal with the problem of somewhere to leave the children were the most dominant themes (CIES, 1995b: 15-16).

By contrast, women who had given birth in hospital and who wanted to give birth there again, spoke about having more confidence in hospital, that doctors know best what to do. Other reasons given were because of previous bad experiences at home—much pain, a dead baby, giving birth alone. One suffers more at home while there is always help in the hospital. At home it is difficult to deal with infection; it is cleaner in hospital; employers said it was better to go to hospital, there was more attention for the baby in hospital, a previous Caesarean section made hospital inevitable as did a diagnosed placenta praevia for which Caesarean section was the only option. The most dominant themes here were more confidence in the hospital, the notion that it is cleaner in the hospital, and that there is more security in the hospital. Three of the women who had given birth in hospital said they would have their next baby at home because they would not have to deal with the cold and they would be attended better at home (CIES, ibid.).

These sets of responses represent two ends of the extreme, with people expressing similar rationales for wanting either home or hospital in relation to the issues of security and type of care. But it is also apparent that the interviewees who opt for hospital have accepted a medical interpretation of the birth process as being most appropriate, signalled by concerns about safety risks at home and home not being as clean as hospital. The interviewees who opt for hospital opt to pay for a hospital birth, no matter how that might stretch their resources, in order to gain the safety of the medical model. The comment about employers recommending hospital as a better, safer place, suggests that there is an inevitable pressure on rural women in urban areas to begin to conform to the living patterns of women who are in higher socio-economic groups. The link between level of schooling and hospitalised childbirth also suggests this pattern of taking on the social practices associated with what is seen as a modern urban way of life.

ILCA attempted to quantify the responses from women about their desired place of birth, scoring them along five different possible reasons for giving birth at home. One of these was that women wanted to have properly warm and protected circumstances in which to take care of themselves and wash themselves after the birth; 24 women from their two rural sites expressed themselves as having confidence in giving birth at home. Lack of money to pay for hospital services did not figure in the responses from any of the rural interviewees and from only 1 of the small urban sample. Maltreatment
in the hospital and fear of the hospital were expressed by 12% and 16% respectively of the women from the two rural areas. In the very small urban sample, four women expressed fear about the hospital, lack of confidence in the hospital and maltreatment in the hospital as being part of the conditions they experienced. One woman only from their urban sample said she preferred being in hospital but felt she had to go there as a result of complications in birth.

The combined Sucre teams were dealing with very different sub-samples. Women in Phichichua and Tomaycuri, with one exception, all wanted to give birth at home. On the negative side, they expressed fear of mestizo hospitals, fear that they might die in hospital, that the presence of other people would cause them to be weak in labour, that vaginal examinations, to which they did not want to be exposed, would weaken them. Officially, medical attention in the postas is supposed to be free but money did not come into their likes and dislikes; rather their opposition had to do with all the things to which they were unaccustomed. The women said that postas were too fardistant from where they lived and that they wanted the intimacy of their homes, the support of their husbands and family members and a partera if that were necessary (Arancibia, Platt et al., 1995a; Torrico, 1995b).

The small sample in Ocurí represent a half-way house between this level of rejection in the rural sites and acceptance of hospital birth. Half the interviewees welcomed birth in hospital with rationales similar to those expressed by the women in the CIES sample who preferred hospital: it can be dangerous at home; in the hospital the level of care and attention is good; because there has been a bad experience, a baby dying at birth in the past at home; because the partera does not want to attend at home. Women preferring to give birth at home do not have a very negative reading of the hospital experience but they prefer their homes and, they know the hospital is close by. There was one exception to that perspective, a woman who had had a very bad experience and an infant death in hospital (Aguilar and Bradby, 1995a: 33-35).

In the peri-urban areas of Sucre, there was greater negativity amongst those women who did not go to hospital, with reasons similar to those given in the CIES sample: the cold, the fear, the maltreatment, as well as the lack of economic resources. And, similar to the woman whose baby had died in the hospital in Ocurí, women who had had traumatic experiences in Sucre hospitals, wanted to give birth at home. One woman whose baby had died hours after being born in hospital just the day before she was interviewed, blamed the death on the doctor ordering her to continue to walk in labour after she had told him the baby was about to be born. The baby was just saved from
falling to the floor as it was born and died a few hours later. It was the woman’s third child (Murphy-Lawless, 1995: 3).

Some women had to choose hospital, having no one at home to attend them in labour. Women who gave birth in hospital disliked many aspects of the treatment, such as episiotomies and the use of forcible abdominal manipulations to achieve the delivery of the placenta. They disliked the fact that their husbands could not be present. But on the whole, they appeared to have accepted the rationale that hospital, if far more unpleasant, was safer.

The views of women on hospital or home are becoming more polarised. On the one hand, indigenous women are clear and decisive in rejecting situations of bad treatment, situations which they fear because they cannot exercise any degree of choice or control within the hospital, most especially not in the face of mestizo staff. On the other hand, the biomedical arguments about safety and about ‘parto limpio’ are coming to figure in women’s accounts of why they accept birth in hospital, even if they do not accept the conditions that go with it.

The problem from the perspective of this project is the unsustainability of those biomedical arguments about safety and place of birth.

13.5 Conclusion

Two hundred and ninety-eight women were interviewed in the quantitative phase, 161 of whom gave birth at home and 132 who gave birth in hospital, 5 in other places. There were 102 women from rural sites and 196 were from the peri-urban areas near Sucre and from two districts in El Alto near La Paz.

The baseline data on birth practices revealed that women see few serious problems in pregnancy, with the exception of malpresentation. By and large, they use traditional Andean techniques if they feel they need them. More than a third of all women use manteos and massages during pregnancy. Just over a quarter of women took mates. Contact with state health care personnel during pregnancy is lowest in the most rural areas, proportionately higher in peri-urban areas, highest in El Alto. But the common pattern of attendance appears to be in the nature of a once-off visit only. Pregnancy is not seen as a potential threat in the way western biomedicine sees it. This calls into question the current emphasis on developing a full western model of antenatal care. It is a waste of precious resources when a biomedical notion of risk
is outside the cultural norms. It is a waste of resources in any case as the risk model has almost no predictive value.

Of the total 298 labours, 60% lasted under 12 hours. 52 labours were thought to last longer than 24 hours. Three women in this group were transferred by relatives from home to hospital when the family judged that birth was not possible without assistance. Labours lasting over 24 hours were considered to be problematic but not just on the basis of time. Other characteristics, such as ‘wawa trancada’, malpresentation, were thought to account for why the labours were prolonged. Parteras were called to assist in 10% of births. The data indicates a lack of ‘fit’ between the 12-hour rule, based on the partogram, and how women themselves see the issue of prolonged labour.

Almost every hospital birth was either in the gynaecological position or a supine position, the most disadvantageous position for birth and a policy which has been rejected by the WHO because of the extra burdens it places on the labouring woman. State health services should alter their policies on this issue. In the home, positions with a vertical axis for birth accounted for 32% of births.

Mates were the most common form of self-help for women during labour, taken by 39% of women. 33% of women walked during labour, while massages and manteos were used by 23% and 22% of women. In a handful of cases only were mates (10 cases), massages (6 cases) and manteos (1 case) offered in hospital. These are non-invasive forms of assistance during labour which have a documented favourable impact on instances of obstructed labour, for example. They are simple to incorporate into a hospital setting if traditional practitioners are treated with respect and openness. Hospitals should respond to this challenge so that women giving birth there are properly supported with these techniques. Awareness training on their valuable nature should be built into biomedical, nursing and paramedical teaching programmes as well as being a recognised component in training courses for parteras.

The two biggest single problems in labour were ‘frío’ (cold), affecting 46% of women and ‘susto’ (fear), affecting 30% of women. These were somewhat more common for women who gave birth in hospital, compared with those who gave birth at home. Whereas women had measures they could take at home to cope with these problems, they were not free to do so in hospital. Hospitals can and should respond to these problems of cold and fear.
Four problems which are potentially serious in terms of maternal mortality: strong bleeding, oedema, ‘wawa trancada’ (transverse lie or other impacted labour position) and breech presentation were reported by 22%, 21%, 13% and 9% of women during labour. The constructions of these as problems within Andean medicine do not correspond directly to western biomedical categories. Again, there is a lack of ‘fit’ here, which calls into question how risk categories are being promoted through the state health system, including training of parteras. Unless or until the health authorities take on the logic of these pre-existing categories and work with them, current teaching on what to do in case of an emergency is valueless. 21% of women reported no difficulties in labour.

The argument about the necessity to establish the social model of birth as distinct from the biomedical model, comes out most clearly in reviewing the types and levels of biomedical intervention in the hospital births. 47 women or 35.6% reported receiving intravenous drips before they gave birth. The assumption is that almost all these 47 women had their labours accelerated. The majority were told that the drip was to help the baby be born. Almost 26% of women were subjected to an episiotomy. The rate of Caesarean section was 19%. All three of these rates are either above or well above what is considered appropriate use in current evaluations of these procedures, given that all three also entail increased physical trauma and risk for the woman. The rates of induction/acceleration and of Caesarean section fall outside the 9% to 15% of women who are thought to require serious obstetric intervention on the grounds of serious complications.

The extent to which women labouring on their own were in command of their situation, assessing their needs and deciding what they did or did not require, is striking in comparison with their counterparts in hospital. In the absence of the few major identifiable factors that could compromise a woman and her baby in labour, these levels of medical intervention are simply unjustified. Moreover, their short and long-term sequelae are not known. There is a need for a study to focus on outcomes for women, especially infection, pain and secondary postpartum haemorrhage once they have been discharged from hospital.

Practices around the placenta were split between hospital protocols on an active management of the third stage and birth at home, where traditional Andean practices of tying the woven belt and using mates were in evidence. 19% of the entire sample used a position with a vertical axis for delivery of the placenta. In hospital, 93 women or 70% used the gynaecological position. 60% of women reported the cord being cut before the placenta was expelled. 86% put the baby to the breast after the placenta
was delivered. 41.6% of women delivered the placenta at once in hospital compared with 30% at home, a difference accounted for by variants of active management in the hospital setting. 81% of the sample delivered the placenta within one hour. 10 women took over 1 day with 1 woman going to hospital after 1 week for a manual removal of the placenta. If it were possible to discover more about the rationales for cord-cutting before the placenta is delivered outside the hospital setting and to modify it, the results could be very beneficial for women in reducing the incidence of retained placenta. Equally, the abandonment of active management policies inside the hospital setting and its replacement by physiological management would be beneficial and would prevent women from facing the further hazard of secondary postpartum haemorrhage once they had been discharged. It should also be noted here that the ‘cascade of intervention’ carries real hazards for women and that increased use of acceleration during labour with oxytocic agents leads to increased incidence of primary postpartum haemorrhage.

46% of the sample reported that they had no postpartum problems. 22% reported that they had haemorrhage but again there was a problem in trying to classify blood loss in biomedical terms. One woman attended the local posta because she had had what she judged a dangerous loss of blood. 42 women reported suffering from ‘sobreparto’, infection. The nature of the infections is not known although one serious self-reported case of infection occurred in which a woman went to hospital for assistance after giving birth elsewhere. Sajt’ay was reported by 6% of women. This is not to say that serious problems of morbidity are not occurring and that there is not potential for maternal mortality. But the mortal threat of sajt’ay does not ‘fit’ with the threat of postpartum haemorrhage. Again, there is a challenge to the state health system in how they respond to radically different modes of interpreting the body.

In the 132 hospital births, only 56 women asked to keep the placenta. Only 20 were given the placenta. Having and burying the placenta is central to Andean beliefs about the best future for a new-born child and the custom should be honoured by the hospitals. Special broths or food to rebuild strength were taken by three-quarters of the sample and mates to help heal the body and chocolate to cleanse the blood were taken by 52% and 28% respectively of the whole sample. Customs about washing were difficult to observe in hospital where immediate washing was the norm. This norm too could be changed to accommodate women’s needs. Women were able to adhere to them in their domestic setting if they gave birth at home. Customs on resting differed from place to place but the majority of women appeared to rest for any length of time from 1 day to a week.
Looked at by place of last birth (Figure 24), 90% of those who gave birth at home preferred to give birth at home, while 10% of the 161 women who gave birth at home wanted to give birth in hospital. Of the 132 women who gave birth in hospital, 71% wanted to give birth in hospital, while 29% only preferred to give birth in hospital.

Finally, 38% of women stated that their desired place of birth was hospital and 62% of women that it was home.

‘Of the entire sample of 298 women, 62% wanted to give birth at home while 38% wanted to give birth in hospital. Looked at by place of last birth, 90% of those who gave birth at home preferred to give birth in hospital. Of the 132 women who give birth in hospital, 71% wanted to give birth in hospital, while 29% wanted to give birth at home’.

The data did not reveal in sufficient depth how people dealt with the range of postpartum problems. Given that the majority of maternal deaths and maternal morbidities occur after birth, these need to be studied in greater detail than this baseline questionnaire permitted. The use of mates, preparation, combinations and dosages also deserve a detailed evaluation study.

The intention of the quantitative phase was to pin down, if possible, differences and distinctive patterns between women giving birth at home and women giving birth in hospitals, and to investigate these difference as well, in relation to women’s status as recent migrants to the peri-urban areas of Sucre and El Alto. Do women have more choices around birth, more scope to maintain their health in rural areas where, the assumption prior to the fieldwork phase was that traditional knowledges and customs remain strong, or in peri-urban areas where cultural influences are more obviously mixed and where there is, notionally at least, more access to state health care services, including hospitals. 30% of the women interviewed were monolingual. However, given the usage patterns of Andean medical techniques and knowledges amongst the largely bilingual group of women in El Alto, it is not clear that language is the sole route whereby people preserve different practices and customs around birth. On the other hand, being monolingual in Aymara in a hospital setting is an enormous handicap when state health care staff are also monolingual, in Spanish only.

Both groups of women, rural and peri-urban face severe disadvantages, although these are more immediately apparent in our sample of women from the peri-urban areas where they
appear to have both more and less choice. They are in closer proximity to the realities of the hospital system, the actual as distinct from the imagined difficulties of biomedicine and the acute problems of maltreatment which are part of these realities. But the very proximity of the biomedical system means that many women are also more likely to take it on, to take on its thinking, despite constraints on family income. The belief that the hospital offers parto limpio, for example, may appear as an inescapable logic when women are forced to deal on a daily basis with the problems of no piped water and no toilet facilities in their homes, circumstances which make living in built-up urban areas difficult and hazardous when compared with rural areas. The fact that hospitals are also a source of infection and that specific interventions dramatically increase women’s exposure to infection are not flagged in debates about the place of birth where hospitals are seen as safe and biomedical knowledge superior (although some women from both the peri-urban and rural settings did express fear of dying in hospital). The lack of economic resources clearly prevents a percentage of women from using hospital services. On the other hand, when they give birth at home, they may face having fewer experienced family members to draw on, less available help from skilled parteras, as well as not necessarily having emergency biomedical support. This drives many women into hospitals while leaving other women more vulnerable at home. Finally, there is no choice for women and no negotiation within the biomedical system once they do enter it.

By contrast, women from the most remote rural areas have only come into contact with the hospital system very occasionally. There were only two instances of this in the 92 women who were interviewed in Phichichua, Tomaycurí, Inka Katurapi and Unkallamaya altogether. Women do have some contact with the biomedical system through the postas although more often with the sanitario or the nurse auxiliary, than with a doctor. This does not usually come into play in respect of giving birth except when what appear to be insuperable difficulties arise. Two women gave birth in postas. A further five women from these areas had contact with local medical personnel during birth in their homes. Women in the rural areas have the positive advantages of family support and the expertise of older experienced women, as well as parteras and other

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28 A 1992 study of the living conditions and the extent of poverty in the peri-urban areas of Sucre found that 22% of homes were without piped water, 48.7% of homes had no access to a toilet (CEDEC, 1992: 68-71).

29 The same 1992 study of conditions in the peri-urban areas of Sucre established that the average monthly family income was 266 Bolivianos, approximately US$75.00 at that time. Nationally, at that time, the estimated cost of the basic family shopping basket for one month was 734 Bolivianos for a family of five. On this basis in the peri-urban areas, 74.7% of the population could purchase only 70% of the shopping basket. 29.6% could afford to purchase only 30% (CEDEC, 1992: 56-7, 77). In 1995, charges for giving birth in hospital in Sucre ranged from 25 Bolivianos (where free clothing was provided for the baby) to 75 Bolivianos. Antenatal care was free in the smallest unit, a health centre. Elsewhere it ranged from 4Bs to 10Bs for each visit. In 1995, the Boliviano was worth approximately 77% of its 1992 value when exchanged for USS.
traditional healers, the value of which is far more than just social (see also footnote 1). What they do not have and where they are absolutely disadvantaged is guaranteed access to competent and sympathetic emergency biomedical facilities of sufficiently high standard if they require them.

Faced with problems during and after birth, women interviewees from these sites mostly reported dealing with them through their traditional networks of help. It is unfortunate in one way that no woman was encountered from the rural areas during the course of these interviews who had needed emergency biomedical assistance because of direct birth complications, unfortunate in that we have no concrete instances of how women and their families might try to deal with even the practical problems of locating other help, if all help at the community level failed. The obstacles families face under such circumstances are undoubtedly very considerable and the issue of how emergency obstetric services are structured requires urgent study, always bearing in mind that training and basic equipment to deal with emergencies can be pushed to the very edge and beyond the state health care system and that there is a reasonable time frame in which to work with emergencies (Maine, 1991). This does not require hospital buildings. It does require a measure of lateral thinking to dismantle the urban model of the hospital-based health system.

The two cases which, on the basis of the women’s own judgement, did require emergency help, for a transverse lie and for a retained placenta, occurred in ILCA’s urban sample. In one of these, the woman went to hospital with retention and infection a week after the birth and apparently required a total hysterectomy as well as treatment for complications to the urinary tract. There were also the three cases in Ocurí, where family members transferred a woman to hospital, judging that they were unable to give birth at home (Aguilar and Bradby, 1995a: 27).

The strength of the social model of birth, where knowledge of existing technologies and support networks flourish and where there is a commitment to the physical, psychological and spiritual aspects of birth, appeared to give women great confidence in handling matters themselves. This is in spite of the fact that the period after birth, when problems of maternal morbidity would become apparent, was an issue of concern for over half the sample and that maternal mortality, even if not known in categories recognised by western biomedicine, was not unknown in a number of the interview sites. Yet the consciousness of possible serious problems and even extreme danger to which women might be subject, did not deflect the majority of women from expressing their

30 It is difficult to tell from the details of the woman in *Inka Katurapi*, who was given an intravenous drip and had her baby delivered by forceps, whether this was in fact an emergency.
intention of continuing to handle birth themselves. Their techniques of management can be characterised as conservative and non-aggressive to the woman’s body, even when problems do arise.

By contrast, replies from women who found confidence in the biomedical model, emphasised fear and worry about what things can go wrong in birth, attitudes which are derived from that model and the accompanying rationale that birth is only ever normal in retrospect. The biomedical management of birth, where doctors dominate, as distinct from nurses or midwives, is characterised by aggressive techniques, reflected in the range of interventions. This style of management cannot be seen as separate to the problem of why so many women have no wish to use the state health care services.
Reducing maternal mortality and morbidity in Bolivia