

CHAPTER 9

MATERNAL HEALTH AND MATERNAL MORTALITY IN BOLIVIA

9.1 CURRENT DEMOGRAPHIC PROFILE

The vital statistics which form the backdrop to the current rates of maternal mortality in Bolivia indicate a young population with a burgeoning reproductive potential. The figures used here are drawn from the most recent statistical survey of demography and health carried out by the *Instituto Nacional de Estadística* in Bolivia, the report itself known as the ENDSA report. The total fertility rate (TFR) has been dropping gradually, from an estimated 6.15 in the 1975-79 period to 4.8 in 1994 (*Instituto Nacional de Estadística*, 1994: 29). The current median age of the population is just over 18 years and the crude birth rate is 35.68 per 1,000 (Bolivia, *Ministerio de Desarrollo Humano*, 1994a). In that same period of time, 1975-1994, the country's population appears to have increased by 1.8 million to its current estimated 6.8 million (*Instituto Nacional de Estadística*, 1994: 1). The country faces a classic demographic dilemma of a trend to lower fertility but an increase in population because of the absolute number of women of childbearing age who are giving birth.¹ Population density is low (at 5.8 inhabitants per sq. km., the lowest in Latin America) but there is a growing disparity between the urban and rural rates of growth, 4.16% and 0.009% respectively (Bolivia, *Ministerio de Desarrollo Humano*, SNIS, 1995). The Altiplano, for example, where 50% of the total populace lives, accounts for 48% of the urban population, with a dramatic concentration of numbers, over one million people, in La Paz together with its peri-urban area of El Alto. El Alto is the fastest-growing conurbation, and currently has a 9% annual increase in its population (Van Lindert and Verkoren, 1994: 48). This is an especially striking contrast with the small and very scattered settlements of the rural Altiplano. During the 1980s, disastrous conditions of extreme drought and flooding worsened the prospects for subsistence living in the Altiplano, while foreign food aid and cheap imported food destroyed the means of livelihood of many marginal Bolivian farmers. The increasing urban growth rate has been fed by the inevitable migration from the countryside in the wake of these disasters. The

¹ This trend to lower fertility is not evenly distributed, however. Women in some regions of the Altiplano are experiencing increasing pressures to have more rather than fewer children. In Qaqachaka for example, the ideal family of twelve children is now being urged on women as an achievable norm by their husbands. An increase in the population here and in neighbouring ayllus presents a demographic crisis in a context where land wars have increased and the local eco-system itself is in crisis (Arnold and Yapita, 1994: 15-16). See also note 12.

growth rate has also been fed by the increased necessity for cash to pay for schooling, health care and other aspects of living standards as the autonomous nature of farming and herding has been undermined (Arnold and Yapita, 1994: 16). Recent migrants bring with them very different needs and expectations in relation to their health care when compared with the settled urban population.

This is no simple division between indigenous communities, who constitute roughly 65% of the Bolivian population, and mestizo and Spanish-origin Bolivians. It is arguable that the most disadvantaged people are now the indigenous communities living in the rural areas whose traditional livelihoods are traditionally marginalised. For, in addition to a bleak economic outlook and a situation where male out-migration to the cities and beyond becomes commonplace, they have the highest mortality rates, as well as the worst provision of state health and education services (Van Lindert and Verkoren, 1994: 48). Figures indicate that 52% of the rural population has access to general state health care services (supplemented by the work of NGOs) compared with 77% of the urban population (UNDP, 1995: 166). But the levels of these services are inadequate and the forms of provision are often disabling in respect of local cultural needs and patterns. For example, the *sanitario* or trained health-worker is who staffs the local health stations or *postas* is usually a married man (where a woman might be preferred) who may actually only be living in the *posta* for a limited period so that for months at a time, the *posta* is empty (Arnold and Yapita, 1994: 8). Existing cultural patterns have contributed to radically different criteria around the central experience of giving birth, and there has been tremendous difficulty at the level of the state organisation in engaging with and responding to the complexity of ethnic dimensions, both in the rural areas and in the peri-urban areas where recent migrants live. One major handicap that women from other ethnic backgrounds face is the linguistic incapacity of medical staff in respect of indigenous languages. Doctors especially usually have only Spanish with which to communicate with Aymara and Quechua-speaking women which places the burden of adequate communication on the women themselves in settings where they are already at a disadvantage because they are indigenous members of the population (see also Bender et al., 1995; Chapter 4.3 and 13.3.3 of this report).

There is a continuing trend to a relatively low maternal age at the time of the first birth. In the cohort of women born between 1970-1974, 18.5% gave birth to their first child before the age of 18 (*Instituto Nacional de Estadística*, 1994: 33). On the other hand, Bolivian women express a strong desire to limit their family size, with 67.6% of women who have given birth wishing to have no more children. The awareness of modern contraception methods appears widespread, 76.7% of women

stating they know about some modern method. Actual usage patterns are much lower however, with only 45.3% of women reporting that they use a contraceptive method and only 17.8% of them, using a modern method of contraception (*Instituto Nacional de Estadística*, 1994: xxxiii).

9.2 THE EFFECTS OF POVERTY AND MARGINALISATION ON MATERNAL HEALTH

The Bolivian government estimates that 69.6% of all families live in poverty, with 51.1% of those families living in the urban areas living below the poverty line and 94% of families living in rural areas living below the poverty line (Bolivia, *Ministerio de Desarrollo Humano*, SNIS, 1995). The UN food agency IFAD, estimated in 1992 that 97% of the rural population of Bolivia was living in extreme poverty (van Lindert and Verkoren, 1994: 31). There is a difficulty however in how poverty is conceptualised in such statistical profiles and a better way of expressing the socio-economic problems women face in bearing and rearing their families might be to speak instead of increasing marginalisation. Families are being marginalised in one way in rural areas, where a way of life that was once viable, based on subsistence farming and herding, is increasingly difficult to sustain. In peri-urban areas, there are different pressures to do with families no longer having the security of grazing animals and of land and having to survive on the margins of a cash-driven economy (Arnold and Yapita, 1994; personal communication, Denise Arnold). In both situations, the problem of inadequate nutrition or chronic malnutrition may be a growing one.² 28.3% of children are thought to suffer from chronic malnutrition and 13% of women who have given birth in the last three years are estimated to be under 145 cms., outcomes that can complicate their reproductive health. The largest groups of women in this position live in the Altiplano and in Cochabamba. In respect of weight, in a sample of 2,272 women who had given birth in the last three years, the median weight was 55 kilos but nearly 30% only weighed between 40-49 kilos (*Instituto Nacional de Estadística*, 1994: 116-117).

During a 1993 conference on maternal mortality in the Andean countries of Bolivia, Colombia, Ecuador, Peru and Venezuela, estimates on the extent of chronic anaemia amongst Latin-American women were presented and it was estimated that 29 to 63% of pregnant women are so affected. 44% of Colombian women were thought to be

² It is the impression of older women in the community of Qaqachaka, for example, that as women have higher levels of fertility, possibly allied to detrimental changes in their social roles as there is pressure to abandon traditional agricultural production, the instances of maternal death are increasing (Arnold and Yapita, 1994: 16-17). It is suggested that paradoxically, short-term gains to Andean communities, as a result of donated food aid from international and bi-lateral aid programmes, may also result in the creation of longer-term demographic, ecological and nutritional consequences because of how they are linked to the diminished reliance on farming and herding. These consequences may prove far from favourable to these same communities (*ibid.*).

affected by malnutrition, in part due to unequal gendered patterns of food access which privileged boys over girls. The conference was told that women of low weight and chronic anaemia ran the greatest risks during pregnancy and birth to their own health, through increased vulnerability to infections and haemorrhage (Alcala and Murillo, 1994: 10-11). There was also a 1983 study of pregnant women in the Cochabamba area of Bolivia which pointed out that 45% of rural women were found to be suffering from anaemia (IRD/Macro Systems, Inc. 1991: 16).

Inadequate nutrition for large numbers of Bolivian women during pregnancy and while breastfeeding was made apparent in another study published in 1991. The study pointed to the heavy reliance on cereals and the lack of good quality protein for pregnant women living in the peri-urban areas of the cities and in the more remote mountainous Altiplano (CONAPO, 1991). The authors of this study observed that the absence of sound nutrition during childhood creates an ongoing handicap for women who, without a solid pattern of growth and good diet during pregnancy, run a much greater chance of encountering pre-eclampsia, dystocic labour, infections, and haemorrhage (ibid.: 177). It must be noted however that there are local communities which are absolute exceptions to this profile. Where communities still have the security of large herds of grazing animals, including llamas, women have access for six months of the year to excellent sources of protein from dairy products. One such community, Tomaycuri, was a fieldwork site during this study and under or mal nutrition did not feature in women's accounts of their pregnancies (Torrico, 1995a).

It has very recently been reported that since 1988, the overall level of calorie consumption has dropped from 2,900 calories to 1,800 calories each day for people living in the Altiplano and the peri-urban areas of La Paz, Oruro, Cochabamba, and Potosi who have been especially badly hit by recent economic shifts (*Última Hora*, La Paz, 27 July, 1995).³

³ The recommended daily intake for pregnant and lactating women is 2,200 to 3,000 calories. It is a widely acknowledged social and cultural problem that women do not have the same access to food as a resource that men have, the overwhelming tendency to feed the man before she feeds herself. See CONAPO (1991: 175-176) for a discussion of this problem in the Bolivian context. This pattern of gendered differences with boys getting more to eat than girls is still part of the pattern in the local community of Qaqachaka, for example, although it is not thought to be as rigid as it once was —see Arnold and Yapita, 1994: 51-52.

9.3 COVERAGE OF WOMEN BY THE STATE HEALTH SERVICES

The coverage by state health services of pregnant women and women giving birth is 52.5% and 47.2% respectively. The antenatal coverage is lowest for women 35 years of age or older, with 56% of these women going without any care from the state services. This compares with 44% of women between ages 20 and 34 receiving no care from this source. Only 38% of women with six or more children attend state antenatal care services. These services comprise attention from a doctor, a nurse an auxiliary nurse or a paramedic, called a *sanitario*, either in state-funded health centre or hospitals, or in those run by NGOs with the permission of the state. Two out of three women in urban areas had some form of antenatal care from these services but only one in three women in the rural areas, coverage being least in the Altiplano.

Only 0.5% of women reported receiving care from a *partera*, a traditional midwife during pregnancy (*Instituto Nacional de Estadística*, 1994: 89-90).

In respect of place of birth, of the ENDSA, 1994 sample comprising 3,580 births in the three years preceding 1994, 42.3 % of women gave birth in a state health services location while 57.2% gave birth at home. Broken down by urban/ rural locations, the figures were:

Place of Birth	Urban	Rural
Health Centre	61.7%	20.9%
Home	38%	78.4%

(*Instituto Nacional de Estadística*, 1994)

The type of assistance during labour for the women in this sample begs some very important points which we can only raise here but see also Chapters 3-5 and Chapters 13-14.

In the urban sample, 61.8% of the births were attended by a doctor, with the next largest category of attendant being a family member or friend, 24.2%. Only 8% of births were attended by traditional midwives.

In the rural sample, 58.1% of women giving birth had help from a family member or friend. 21.6% had help from a doctor and 12.7% from a traditional midwife. 4.4% and 4.6% in the urban and rural areas respectively had help from a nurse, an auxiliary nurse or a *sanitario* (*Instituto Nacional de Estadística*, 1994: 94-5).

The first point to deserve comment is that a majority of women in rural areas give birth with a family member in attendance. The data in Part II of the report and also in Chapter 13 makes clear that the pattern of assistance from family members varies in relation to local cultural patterns. For example, the family member might withdraw at the actual moment of birth but support women during and immediately after the birth (see Torrico, 1995a).

The second point to note is that these statistics record medical doctors in attendance almost twice as commonly as traditional midwives in the rural areas. However, this statistical profile is not as straightforward as might appear. It is clear from our data that women use traditional midwives in the rural areas, most especially for first births as part of an apprenticeship system in which they learn how to manage birth (ILCA, 1995b). Thereafter, women appear to have the confidence to deal with birth by and large on their own, unless they or their family members identify complications which require a *partera* (see also Chapter 13).

Finally, it is notable that nurses and other medical staff, excluding doctors, are so seldom resorted to in either the urban or rural settings.

There are two assumptions which come from international public health programming that need to be questioned in the light of these figures. The first has to do with the role of doctors relative to other skilled personnel such as midwives. The utilisation of biomedical staff for childbirth which is favoured by the WHO, the so-called maternity care pyramid. In the pyramid, professional midwifery staff who are trained to carry out essential or emergency obstetric functions, are one of the two largest workforces, the other being traditional birth attendants. Between these two groups, they handle the vast majority of births (Kwast, 1995: S68-9). The most complicated births and fewest in number are dealt with at the top of the pyramid by obstetric consultants. Because they are the most expensively trained resource, the assumption is that obstetric consultants should be reserved for the most complicated cases while midwives, nurses and other biomedical-trained staff deal with uncomplicated births. In the Bolivian context, however, what has developed over time is a very powerful profession of obstetrics while the midwifery profession has been virtually non-existent (Kwast, 1995: S69-70). Even in general medicine, the ratio of doctors to general nurses is poor, with 100 doctors to every 88 nurses. Nurse training has remained badly under-developed and for every 4 qualified doctors, there is only 1

nurse trained to professional standards.⁴ In the public health care sector as distinct from that covered by social insurance or those practising privately, there are currently 1,937 doctors practising, 994 nurses and 3,124 auxiliary nurses (*La Razón*, 1995). Up to now, the training of nurses has included the observation of births in hospital, but not the practice of handling births (MPSSP, 1989, cited in Young and Simmons, 1995: 26). There was a training programme for *matronas* in Sucre some twenty years ago, which trained women to deliver in hospital (the *Dispensario San José de Poconas*, in Sucre, was established on this basis), the course was discontinued on the grounds that it was of ‘insufficiently high calibre’ and it has never been replaced. Thus the maternity care pyramid has not been practicable to date in Bolivia.

The second assumption is that of most births taking place outside biomedical services, an estimated 60-80% of the global annual total, are attended by a traditional birth attendant and that only some births are altogether unattended. The cornerstone to policies for the reduction of maternal mortality is that births be attended by trained people, if not by midwives, then by state-trained traditional birth attendants or TBAs (WHO, 1992).

On the basis of these statistics, the Bolivian picture produces extremes at either end of the projected global policy; on the one hand, a preponderance of doctors handling births which has implications for how childbirth is viewed, whether as a potentially pathological event or as a normal event. And on the other hand, there is a significant minority of women who give birth outside state health care facilities and who are not calling on the help of traditional midwives either. If our data sheds further light on why these variations have evolved, it has the potential to help shape maternal health policies on the ground, in terms of women’s actual lived experiences.

9.4 MATERNAL MORTALITY STATISTICS

The importance of this is evident at once when reviewing the statistics on maternal mortality. As noted above in Chapter 8, maternal morbidity and mortality are extremely difficult to estimate accurately. Illness and incapacity in the wake of pregnancy most often go unnoticed and unrecorded. Therefore, figures for morbidities are estimates based on known epidemiological factors and simultaneous cross-national surveys, using hospital records and community-based inquiries in selected centres.⁵

⁴ Bolivia has a ratio of 88 nurses to every 100 doctors but only about one-quarter of nurses have college training and can be considered highly skilled. In El Alto, 80% of the health centres have trained midwives but in Santa Cruz, the percentage is 18% (Young and Simmons, 1995: 26, 47).

⁵ Family Health International is currently analysing the data on 16,000 women from one such multi-centre research project which points to the disturbing conclusion that morbidities are far more widespread than previously thought. See ‘Maternal morbidities affect tens of millions’ in MIDIRS Midwifery Digest (1994), June, 4: 2.

Maternal mortality is inevitably more controversial because of unreporting and misreporting, both due to a series of factors. Taking a summary figure such as the 1 in 73 lifetime risk of maternal death for the 'average' woman in Latin America (Maine, 1991, Figure 10) and backing that up statistically at local or country-wide level is a great challenge. There are changes in these estimates over time because of new demographic and epidemiological factors. Very large populations need to be studied and great care taken to set up stable indicators which can operate over a longer rather than a shorter time frame. This requires amongst other things sophisticated training processes. In general the costs of intensive surveillance methods to capture first-class data on maternal mortality are high and rise in proportion to the degree of accuracy sought and are quite simply beyond the reach of budgetary constraints in developing countries (Royston and Armstrong, 1989: 14-17).

The registration methods associated with a phalanx of certification and recording procedures which are central to the organisation of developed economies are non-existent in a good two-thirds of the world's countries. So alternative methods of estimation must be used. This is reflected in the actual measures chosen to present maternal mortality. The 'true' maternal mortality rate is the number of maternal deaths per 100,000 women of reproductive age per year. This measure is dependent on several other key factors of reproductive behaviour and is not so frequently used. In practice the standard international rate of comparison is the ratio of maternal deaths per 100,000 live births (Maine, 1991: 6-7) although it is commonly referred to as the rate of maternal death.⁶ There are two other measures which can be used also - the lifetime risk of maternal death which is based on the risk of death each woman runs each time she becomes pregnant so the more times she becomes pregnant, the greater her risk of death. There is also a figure for maternal deaths as a proportion of all the deaths among women, which can help establish the ratio of the total maternal mortality rate as a proportion of other causes of death for women (ibid.:7-9).

However, even to document the simple maternal mortality ratio is arduous and multiple source studies have to be used to establish it. In the case of the ENDSA report, the investigators used both direct and indirect methods of estimation, the latter including the sisterhood survey method where women were interviewed about sisters who had died as a result of pregnancy and childbirth in the twelve years prior to

⁶ In practice, the numerator of maternal deaths and the denominator of 100,000 live births do not match. The denominator should be the total number of pregnancies. The problem is in not knowing the number of pregnancies ending in birth, including late foetal death, and live births are used instead as a proxy indicator in circumstances where registration is a problem and different classifications apply. Again, there is a problem in the accurate recording of total live births (Maine, 1991: 6-7; Royston and Armstrong, 1989: 14).

the survey. In all, 26,144 homes were visited and 50,215 questionnaires were completed and used in addition to the annual official registers of causes of death (*Instituto Nacional de Estadística*, 1994: 121-3).

Thus, the survey produced estimates of the risk of maternal death by age group, by region, and, compared with data from a previous five-year study, emerged with the conclusion that maternal mortality has diminished somewhat since 1984-89. But using the simple maternal mortality ratio, maternal deaths by every 100,000 births, the figures remain depressingly high for women living in the rural areas. The urban ratio of death is 262 women for every 100,000 births while the rural figure is 563. The discrepancy is even sharper for women living in the rural Altiplano, where the figure is 591 maternal deaths for each 100,000 births (*Instituto Nacional de Estadística*, 1994: 124-5). The overall total for the country is 390 maternal deaths per 100,000 live births, a total higher than any other mainland Latin-American country.

The distribution of the estimated risk of maternal death in the ENDSA report by the age group of women suggests that the highest rates of death can be expected to occur among women aged 35-39 years. The average lifetime risk of maternal death is estimated as 22 maternal deaths for every 1,000 women or one woman in every 45 dying from complications related to pregnancy and birth (*Instituto Nacional de Estadística*, 1994: 122).

A huge drawback with the ENDSA data is the lack of a breakdown of reasons for maternal death. There is a table presenting data on when death occurred which puts 61.7% of maternal deaths during pregnancy, 22.8% during birth and 15.5% after birth (*Instituto Nacional de Estadística*, 1994: 126). This would suggest at first glance that maternal deaths in Bolivia are entirely out of step with the reasons and timing of occurrence elsewhere (the most common reason in international data for death is postpartum haemorrhage). However, the figures used in this series of calculations by the investigating team did not differentiate deaths due to unsafe abortion, which has been a major killer of women in the Andean region, from deaths during pregnancy due to other causes. The number of abortion-related deaths in Bolivia as a percentage of maternal deaths was estimated to be approximately 27% in 1993 (Alcala and Murillo, 1994: 23).⁷ The figure of 22.8% deaths during labour and birth raises questions about why the frequency of deaths should be so much higher at that point in the birth process rather than afterwards when the effects of postpartum haemorrhage, retained placenta, sepsis from obstructed labour or other forms of sepsis emerge.

⁷ Since the 1993 Andean conference on maternal mortality, the Bolivian government, while not yet legalising abortion in all instances, has made post-abortion care for women a part of its maternal health policies.

Whether this is a problem of recording the time of death is simply not clear. In a small-scale retrospective case study in the Province of Inquisivi carried out by the MotherCare group in 1990 on maternal mortality, the most probable reasons for maternal death were sepsis associated with undelivered foetus, followed by postpartum haemorrhage with retained placenta. Maternal mortality rates were very high for this Aymara-speaking province, 1,400 per 100,000 live births (Howard-Grabman, 1993: 9). Women were aware that malnutrition, in addition to a hard regime of physical labour, created difficulties for them in pregnancy and their reported priority problems were split between too many children and postpartum haemorrhage and retained placenta (ibid.: 71). Postpartum haemorrhage as a result of retained placenta was thought by the medical staff of the regional hospital to be the principal reason for death in the Province of Chayanta (Torrico, 1995a, nota 45) where the recorded rate of maternal mortality was 660 per 100,000 (*Secretaria Nacional de Salud*, 1994: 3). In another study of maternal health in the Aymara community of Carabuco, the maternal mortality ratio was 920 per 100,000 births for the previous six years, again the most frequent cause being postpartum haemorrhage among multiparous women (Solle de Hilari, 1994: 19).⁸

Leaving aside the threat to women's lives posed by unsafe and self-induced abortions, these higher rates of maternal death in the Altiplano are suggestive of the contributory factors of very poor health and nutrition for women in this region of Bolivia, in combination with the problem of their remoteness from traditional midwives and emergency biomedical facilities, should severe complications arise.⁹

The issue is of course not limited to the rural areas. In the MEDICON study on maternal mortality in La Paz, the group found the highest rates of maternal mortality for women who had given birth six times or more, 55.3% with figures of 13.6% for

⁸ The breakdown of birth attendants in this community of 9,000 people dispersed over 250 kms., is also noteworthy: 40% of births were attended by other women in the family, 30% by husbands, 15% by parteras and 10% by state health care personnel (Solle de Hilari, 1994: 19). The question is why there is a greater use of parteras and state health care personnel here than in the rural areas generally when compared with the ENDSA data. This may be accounted for in part by the fact that small rural towns were included in the designation of 'rural'.

⁹ There is no clear picture available at present on the distribution of parteras across Bolivia. A census of parteras and other traditional healers in the ayllu of Qaqachaka is currently being carried out (Denise Arnold, personal communication) but there is no evidence to suggest that every small community has access to a partera. In many peri-urban areas, it appears that *parteras* have been driven to practice clandestinely as a result of hostile reactions from the state health sector. This theme is also explored in Chapters 6.2.4, 12 and 13 below. In the *Manual Guía* for auxiliary nurses, produced in 1987, there is a detailed set of instructions about carrying out a census of social, economic and demographic characteristics in local communities and included in this, is a separate form for a census of '*parteros empíricos*'. Information is sought on how widely the partera practices, whether she can read and write, whether her work is solely attending birth or involves other forms of medical practice, whether she has received any training (*Ministerio de Previsión Social*, 1987: 36-7). It would be interesting to know how successful this exercise in data collection was.

women pregnant for the first time and 15.5% for women with 2-4 births (MEDICON, 1994: 77). A retrospective study of maternal deaths at the Germán Urquidi Hospital in Cochabamba between 1979-1988 was produced in 1990. There were 143 deaths during that ten year period, 81% of these women coming from the lowest socio-economic groups. 57 deaths were the result of infection, with a third of these being due to unsafe abortion. Haemorrhage was the next greatest single factor leading to death, accounting for a quarter of deaths. Terán cites the problems of poverty and poor nutrition as contributing to the poor general health of women. Specifically, he cites both poor professional paramedic and medical care and bad hospital practices that led directly to the deaths of 50 women. However, he also cites women's own actions including reluctance to come to the hospital sooner and their reliance on traditional midwives as contributing directly to 47 deaths (Terán, 1990: 42-44). Another way of looking at this grim picture is that women were justifiably reluctant to use state health resources, given the poor outcomes.

9.5 GOVERNMENT STRATEGIES ABOUT MATERNAL HEALTH

Since the late 1980s, the Bolivian government has been progressively developing strategies to respond to maternal mortality as part of overall reproductive health care policies. It was argued that because 80% of maternal deaths occurred in the domestic setting, where women were giving birth alone, with a family member only in attendance or with a *partera*, training should be a major focus of attention. In 1980, 14% of women gave birth with a trained person in attendance. This had risen to 35% by 1988. This increase reflected in part the determination of Bolivian health care authorities to train traditional midwives which had been an ambition since the 1970s. There were evaluations of this scheme in 1982 and 1988, revealing the lack of coordination between traditional midwives and state health personnel (Pomier, Murillo and Quispe, 1991).

Efforts to deal with this gap and extend biomedical thinking about birth were part of the campaign announced in 1990 by the National Secretariat of Health, to secure greater community participation in '*parto limpio*' or clean birth. On the one hand the government admitted that the economic resources were not available to offer every woman a hospital birth. But, they argued, the socialisation of clean birth would permit many families in the *campo* (countryside) and the peri-urban areas to maintain their own traditions about birth in the home, while making birth safer. This could be accomplished by training courses for those assisting at birth whether fathers, young people or others (*El Mundo*, 17 June, 1990).

By 1991, some 1,500 people had been through these short courses when the government announced a national programme of training to link the traditional midwives or *parteras* with the state health services. Its objectives were to extend training for *parteras* to include biomedical risk categories in pregnancy and birth, when to refer women on the basis of these signs of difficulty or complications; and the redesigning of a minimal level of equipment for *parteras*. A central part of this package was to set up structures of supervision of *parteras*. The policy makers argued that supervision was perfectly consistent with their other stated objective of encouraging the *parteras* to maintain and provide the traditional Andean medical knowledges side by side with biomedicine (Pomier, Murillo and Quispe, 1991: 7-10). The impact on the health of women in poor economic conditions was acknowledged but this was not the direct target of government efforts. Rather there was a continuing strong emphasis on hygiene and teaching the avoidance of contaminating practices and substances to help reduce maternal morbidity and mortality. This policy appears to have been set in place with a fairly limited evaluation or investigation into the medical practices of the indigenous communities and their own midwives, possibly because the resources for such social investigation were not available (*ibid.*). It did reflect mainstream international programme concerns about the causes of maternal mortality and the potential damage to women using traditional systems of care. We will return to the problem of how these international perspectives were developed in Chapters 10 to 12. The lack of communication and resultant tensions between such policies and the Andean medical system are discussed in Chapters 5-6 and 13. In 1990, the government had set up a programme for national reproductive health which was backed by obstetricians and gynaecologists concerned with the rising levels of unsafe abortion and rising rates of mortality (Young and Simmons, 1995: 17). They pressed home the need for access to good reproductive care services, including contraceptive services and saw themselves as the professional group best placed to deliver these services (*ibid.*).

During the same period, the notion of '*parto humanizado*' or humanising birth practices began to circulate in relation to childbirth in the state health sector. A group of obstetricians and gynaecologists founded MEDICON in 1986 primarily to introduce a new way of thinking about birth into biomedical practice. They argued that 80% of births are normal and therefore there is no justification for submitting each woman to the latest technology and fashionable drug regime on the grounds that she is a potential case of risk. They rejected hospital practices such as isolating women when in labour, the routine rupture of membranes, and imposing the practices of lithotomy and the gynaecological position during birth. The group urged doctors to use their scientific and technological methods critically, not unthinkingly (*Presencia*, 7 July, 1989). An

even stronger critique of hospital birth practices was published in 1990, citing the above and four other routine practices in labour which were either unnecessary, such as routine shaving, or that led to physical and psychological trauma for the woman and her baby (Alvarado, 1990). A study carried out by a group from the National Secretariat of Health in 1992 focused on the high percentages of routine Caesarean section rates in five maternity units. In one unit in Santa Cruz, for example, section rates had risen from 23% in 1987 to 28% in 1990 and there seemed no clear criteria for this rise. The authors sought to encourage hospital staff to develop a positive 'autocriticism' and to improve practices by a review process (Camacho and Murillo, 1992). These perspectives from within the obstetric profession have resulted in changes in individual hospitals and clinics but have as yet not been widely responded to in the state health care system. If anything, the existing tensions between Andean medical practices during birth and the biomedical system have probably been heightened by the lack of responsiveness on the part of hospitals to change.

In 1994, the MEDICON group published a study about maternal mortality in El Alto, in which they stated that the problem of maternal mortality is an *agujero negro*, a black hole, that sucks in the claim by the medical authorities that it is possible to prevent 90% of maternal deaths within existing social and economic conditions that women face. The group believes that maternal mortality is a measure of the extent of inequality in Bolivian society and that it is vital for the government's emphasis to be on improving those economic and social conditions that are the backdrop to poor maternal outcomes (MEDICON, 1994: 59-61).

Also in 1994, the *Grupo de Solidaridad de El Alto* and TAHIPAMU (*Taller de Historia y Participación de la Mujer*), published a series of accounts by women from El Alto on their experiences of giving birth in hospital centres (GS/TAHIPAMU, 1994). These interviews have borne out the need for radical changes in the hospital system, if the conflicts between biomedical beliefs and Andean medical beliefs are to be reconciled in the best interests of the women themselves. The very poor quality of hospital services, the maltreatment of women by staff, the ignorance on the part of medical staff regarding women's language and cultural traditions, the inexplicable nature of many hospital procedures, women being left alone and cold while they labour, the lack of decent basic food were all cited as major obstacles that prevent women from using the state health care services.

The importance of this critique of hospital practices and biomedical attitudes was not fully reflected in the government policy for reducing maternal morbidity and mortality, *Plan Vida*, which was published in 1994. In line with the objectives of the

global Safe Motherhood Initiative, *Plan Vida* aims to halve maternal mortality and perinatal mortality between 1994 and 1997. The cornerstone of its policies in relation to the reduction of mortality is to increase the number of women who receive antenatal care from state health services with an emphasis on hospital birth wherever possible. The Plan proposes various reforms to help achieve this increased access, among them, training of health care personnel to a higher standard; developing the technical capacity for more effective coordination of resources including transport and communication in emergency situations; increased popular participation in resource planning; increased popular education about the signs of danger and how to identify risks of pregnancy and birth, and an effective system to monitor and evaluate maternal deaths. The Plan is meant to operate at an intensive level initially in 22 provinces, selected because of their poverty. Women with levels of chronic malnutrition during pregnancy, especially those that live in rural areas, will receive supplements of food, iron and folic acid. The other areas of intervention are the maternity hospitals in the urban areas and the 12 regional centres of health provision. On behalf of the National Secretariat of Health, *Plan Vida* is trying to alert doctors to the important possibilities of '*parto humanizado*' and the need of radical improvement of hospital conditions for women, to lower the rates of Caesarean section, to secure better treatment and better take-up. One aspect of the plan is to set up a postgraduate qualifying course for nurses to train as obstetric nurses.

The Plan also expressly states the intention to increase contact with *parteras* and other community healers which contact can also serve the purpose of expounding the concepts of good maternal care and the routes to prevention of maternal mortality. A number of workshops are proposed to increase training of and contact with the *parteras* over a three-year period. But, although the plan proposes to learn about the perceptions, knowledges, and practical social relations of birth in the community, there is no explicit intention to use relevant aspects of the Andean medical system or the skills of its practitioners. The *parteras* are seen as being on the periphery of a standardised three-tier model health care system (with the components of health posts or health centres, a regional or district hospital, and a major urban teaching hospital), where the *parteras*, at best, are used as a link to a health service which is deeply uncertain about their skills and value, when not rejecting them outright.

There are three principal elements which can be identified as the conceptual background to *Plan Vida*, all of which originate in the western biomedical model of obstetric care. Firstly, there is a risk model of pregnancy and birth where it is hypothesised that risk factors can be predicted and identified. Therefore, ongoing antenatal care has a role in monitoring pregnancy. This model also gives rise to the

assumption that methods of monitoring can be taught to health care personnel along with teaching about signs of impending complications to make a complete package. Secondly, *Plan Vida* relies on a centralised system of health care, wherein it is assumed that the greatest range of skills is concentrated in urban centres and teaching hospitals. Thirdly, there is an assumption that women can be converted to being users of health services, that they can be changed from self-providers to users and thus leave their own practices behind them.

Regional versions of *Plan Vida* bring home the impact of these assumptions. In the regional plan produced for Chayanta Province in the Department of Potosi, for example, resource gaps are identified in relation to roads and transport vehicles for the district hospital in Ocuri, run by the NGO, IPTK. The emphasis is on getting women with complications which have been identified to the district hospital. (*Secretaria Nacional de Salud et al.*, 1994), that is to bring them into a centralised health care system. Ignoring the time frame necessary to create better road access (only 5% of Bolivian roads are asphalted and only 20% of roads can be used year round—van Lindert and Verkoren, 1994: 70), concentrating on that end of the problem removes the focus from local communities and from the possibility of redistributing available resources to strengthen and reinforce existing care systems at those levels. The IPTK plan can best be described as a top-down system as defined by the categories of obstetric and public health medicine, rather than a participatory bottom-up strategy of evaluating and supporting local skills.

There is no indication that the programme planners who produced *Plan Vida* paid close attention to the meanings of pregnancy and birth in respect of Andean beliefs and practices. At the time the Plan was drawn up, there was one major study extant on such practices (CIAES, 1991) but its findings do not appear to have been evaluated when constructing the model for maternity health care. This is not especially surprising, given the general direction of international packages on maternal health. These packages tend to re-create the existing western biomedical model elsewhere, not least because the WHO and other international health agencies promote these well-known models and services as holding the key to maternal health even though many aspects and perhaps as much as 90% of the technologies involved, remain unevaluated (McDonagh, 1996; Wagner, 1994). It has been a rarity to see the issues of other systems of health care identified as anything else than cultural stumbling blocks to gain acceptance of obstetric thinking on childbirth. So traditional practices have not been submitted to thorough evaluation of those that are beneficial, those that are ineffective and those which are harmful.

The attempt to educate women into being users also entails their being educated into taking on ways of thinking about pregnancy and labour which are alien. There is no direct correspondence, for example, between the meanings of oedema in pregnancy and *hinchazón* (swelling). The first is an uncertain indication of pre-eclampsia which has been used for many years in antenatal clinics (see also Chapter 11.5). The second in the Andean ethnophysiology, can also be a sign that the pregnancy is going well and that blood, important for aiding delivery, is accumulating. This and similar non-correspondences have the potential for creating tremendous problems not simply at the level of cultural conflict.

This lack of awareness of what community participation can mean has emerged in a recent evaluation of a community-based reproductive health project in Cochabamba (Bender et al. 1995). On the one hand, this two-year project had the objective of delivering quality maternity health care and sought to use a participatory approach with the team of service providers based in the Quintanilla community hospital/clinic and third level maternity hospital taking referrals of women with complicated cases. One positive outcome of this approach was that health care personnel came to realise that their work was hampered when they found themselves unable to communicate in Quechua with women and their families about important health issues during pregnancy and birth. On the other hand, participation strategies did not challenge service providers about substantive knowledge bases, their own or other's. In addition to the aim of improving service delivery to women becoming pregnant, the project sought to increase the knowledge base of women clients. To this end, the project worked out of community centres and shop-front meetings to make contact with their clients and begin introducing biomedical concepts. The point is that the women were seen as having 'extremely limited information' about pregnancy and birth (ibid.: 53). Their knowledge base was evaluated at the end of the project and judged to have improved but all that was being measured was the range of biomedical concepts that women had assimilated. What strategies or knowledges the women had to begin with were effectively discarded as non-knowledge. Yet prior research in Cochabamba had compiled a very complex series of practices with which women regularly interpret and deal with their pregnancies and labours (CIAES, 1991). Is it really practicable to reject these practices as a kind of knowledge?

In theory, if funds were unlimited, this hierarchical model of provision is possible if a full-scale service provision can be set up and maintained. In practice, methods of negotiating labour, delivery and the postpartum period which may well be useful and logical in the context of local communities may be lost while at the same time, it is not economically feasible to put a western biomedical model in their place. Moreover,

women rightly reject the imposition of systems of belief about their bodies which for them make no sense and are in deep violation of their own sense of self. It is simply not sufficient as a policy to try and make women the ‘users’ of state health services without taking into account how they have been their own service-providers up to now. Too much is lost and it leaves women too vulnerable.

9.6 CONCLUSION

The broad demographic statistics on Bolivia indicate that the effects of poverty and marginalisation are contributing to poor maternal health, albeit through complex routes; that there may be a substantial growth rate in the population for some years to come; that the growth rate of urban areas is far outstripping that of rural areas; that the majority of maternal deaths are occurring in rural areas. The precise causes of maternal deaths are not clear. There is a problem with the data about the actual reasons for maternal mortality and the social and economic contexts which are the backdrop in communities where specific rates of maternal mortality are quite high. It is therefore difficult to know what kinds of planning responses should be given priority.

In line with mainstream international thinking on maternal mortality, the government has sought to promote training of traditional birth attendants while at the same time bringing women into the ambit of western biomedical services and has produced a wide-ranging four-year programme for maternal health with the target of halving mortality rates in that period.

There are severe social, economic and cultural constraints working against the state’s intentions in this respect and women are a long way off from gaining full health protection during pregnancy and childbirth. There are problems with the assumptions that lie behind this programmatic approach which need to be analysed. These are explored in the following three chapters.

