PART I

INTRODUCTION: CHILDBIRTH PRACTICES AND MATERNAL MORTALITY

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CHAPTER I

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Bolivia has the highest rate of maternal mortality on the Latin American mainland. The rate currently stands at 390 per 100,000 births for the country as a whole, and includes wide regional variations. Bolivia is commonly divided into three broad geographical regions: *altiplano,* or Highlands; *valle,* or Valley region; and *llano,* or Lowlands. The maternal mortality rate for the Highland region, where La Paz is located, is 591 per 100,000 births, more than double that of the Lowland region, where the rate is 166 per 100,000 births. In addition, the overall rate of maternal mortality in rural areas is about double that in urban areas. The combined effect of these regional variations is to give a rate for the rural Highland areas of 929 maternal deaths for every 100,000 births (INE, 1994).

In Ireland in 1990, there were 2 maternal deaths for the approximately 50,000 births, giving a rate of 4 per 100,000 (Ireland, Department of Health, 1993). This makes the rates of death amongst Bolivian women who become pregnant 97 times greater than that faced by Irish women.

1.1 'SOCIAL' AND 'BIOMEDICAL' MODELS OF CHILDBIRTH

Since December, 1993, this European Union-funded research project (under the STD3 Programme, Life Sciences and Technologies for Developing Countries, DGXII) has been exploring alternative practices to improve health and safety during childbearing for rural and migrant women in Bolivia. The project was carried out by researchers from three Bolivian non-governmental organisations (CIES, ILCA and TIFAP) and two European institutions (Trinity College, Dublin, and the University of St. Andrew's, Scotland). It operated in a number of rural and peri-urban sites in the Highland and Valley regions of Bolivia, working with women from the two large native-language groups of Aymara- and Quechua-speakers.

The basis of the project is on the one hand, a deep concern with the tragedy of illness and death women confront in giving birth, and on the other hand, a concern about the approaches that policy makers and planners have proposed to improve the health care of

women. The medicalisation of childbirth in developed western countries, above all in the most economically developed north Atlantic countries,[1] has not been an unqualified success. The process of medicalisation has been dominated by obstetric specialists, and has entailed a continuum of technological interventions which have relied on hospitalising all women for childbirth. Obstetric intervention has evolved from routine artificial rupture of membranes to its possibly most sophisticated variant, the 'active management of labour', which is accomplished with the use of oxytocic drugs. The biomedical or obstetric system has been criticised as dehumanising, alienating, expensive and for not giving to women all the benefits it claims to have done. The technological interventions which it favours are often capital-intensive, and have been subject to much scrutiny by women and by professional midwives during the last fifteen years. Sociologists have documented their adverse impact on the experience of giving birth, while midwifery research is increasingly challenging the nature of unevaluated claims about their efficacy (Oakley, 1980; Katz Rothman, 1982; Kitzinger, 1987; Garcia et al., 1990).

Nonetheless, this 'biomedical model' of birth is a very powerful one because it offers many concrete answers to complications in childbearing which end in illness or death. The biomedical model therefore appears a logical starting place for policy makers in drafting maternal health-care programmes.

In contrast to the biomedical model, we put forward a 'social model' of birth, in which pregnancy and birth are seen not as illnesses but as normal biosocial events which are part of everyday life. The social dimension must receive the primary emphasis in any proposals about maternal care. Biomedicine and, specifically, the speciality of obstetrics, should play a supporting role rather than a dominant one (Wagner, 1994). This social model of birth places the woman giving birth at the centre of the process where her decision-making about what is the most appropriate form of care and attention for her is honoured. The social model of birth also emphasises the importance of midwives as the primary caretakers of normal birth who seek to facilitate the birth process as distinct from controlling it. This social model of birth keys in with the insights about a 'physiological model' of birth, restoring the birth process to one free of unnecessary interventions, which a number of professional midwives in developed western countries have been promoting in recent years (Gaskin, 1980; Flint, 1986; Davis, 1992).

1 North Atlantic countries in this context includes the United States, Canada, and western Europe, the latter broadly inclusive of those countries which are members of the European Union.

1.2 The social dimensions of maternal death

The concern with the reduction in maternal mortality, from which this project takes its starting-point, is one that was articulated clearly in the UN Decades for Women, and which has since acquired international recognition at many levels, including initiatives such as the Safe Motherhood and MotherCare programmes. The concern springs directly from a recognition of the large international inequalities in rates of maternal death, which persist in an era when it would appear that the technologies are available to make death in childbirth largely a thing of the past. Such a posing of the problem would lead to solutions in terms of the 'transfer of technology': from 'developed' to 'developing' countries; and from urban to rural centres within developing societies. Yet any attempt to pose the problem solely in technical terms soon runs up against the social dimensions, not only of birth, but also of maternal death. Two aspects of these social dimensions of death will be considered here.

First, it is necessary to look at the longer-term factors behind maternal mortality. In historical studies of other countries, the long-term factors that have been identified as leading to the decline in maternal mortality over the last two centuries are the general improvement in health, and the general decline in fertility (Tew, 1995). Women's health in Bolivia is clearly affected by the general level of infectious and other diseases, which is to some extent amenable to long-term infrastructural and medical solutions. It also clearly bears a close relation to the level and quality of women's nutrition, raising issues of subsistence agriculture and the spread of the market economy, as well as of women's access to food within the family. All these issues lie largely outside the scope of this project. Similarly, the rapid decline in fertility in urban areas over recent years in Bolivia has presumably been a contributory factor to the improvement in urban mortality rates; while the continuing high fertility patterns in rural areas are clearly a factor in the high maternal mortaliy rates in the countryside. While recognising that these patterns are likely to significantly alter the extent and shape of maternal mortality in Bolivia in the coming decades, they too, lie outside the immediate scope of this project's research programme.

The second aspect of the social dimensions of maternal death is the under-use of existing institutional medical facilities. This problem had been a research question in a recent Bolivian study of pregnancy and ante-natal care used in the proposal for this project (Pereira Morató, 1992). It also turned out to be a common complaint among institutional medical staff on the ground, and one which our project was specifically asked to provide answers to. The problem is mentioned in the government's plan for the reduction of maternal mortality, *Plan Vida* (see below). It is one that dogs all attempts to define the

problem of maternal mortality as one susceptible to economic or technical solutions. The present report elaborates at some length on the social and cultural reasons for what is seen as under-use of biomedical facilities. However, it will be argued that if solutions are to be found to this problem, it is necessary to move away from defining it in terms of the 'cultural barriers' that restrict use, as if the cultural barriers existed only on one side of a divide between 'traditional' and 'modern' medical systems. The report will try to identify areas where genuine *dialogue* between the two systems is already taking place, and to point to ways of supporting and furthering such understanding.

1.3 Childbirth practices in Bolivia

The project builds on existing work on childbirth practices and on experiences of hospital birth in Bolivia and neighbouring countries. Several studies have been undertaken in Bolivia itself in recent years which review traditional childbirth practices in various locations, and which begin to look at the complex area of the ethnophysiology of birth (AYUFAM, 1993; CIAES, 1991). The practices and theories described have much in common with those reported from a study in Peru, which worked with migrant women in Lima (Centro Flora Tristan, 1994), and from a study of Quichua-speaking women in the rainforest region of Ecuador (Baruffati, 1984). All these studies point to a division between traditional ways of birth, and that provided in modern, hospital care. In many respects this divide follows that between the social and biomedical models set out in section 1.1. The thinking in terms of a dichotomous divide was highlighted by the publication in 1994 of a collection of accounts of migrant women's experiences of hospital birth in El Alto, near La Paz (GS/TAHIPAMU, 1994). In addition, the preliminary report done by ILCA for the project was available before the start of the main fieldwork, and its findings were used as a basis for planning the work (ILCA, 1994, later published in Arnold and Yapita, 1996). That report broadly laid the basis for the description of the 'social model' of birth which was an objective of the fieldwork.

However, what is thought of as 'traditional' birth in the above reports is actually an amalgam of various traditions, both native Andean ones, and those of the European colonisers. The linguistic naming of both pregnancy and birth as 'illnesses' in Aymara and Quechua, as well as in popular Spanish, was discussed in the planning of the fieldwork. In addition, several of the practices and theories commonly thought of in Bolivia as indigenous Andean ones have close parallels in the history of European birth practices (Murphy-Lawless, 1996). It has been pointed out by other researchers that the piecemeal adoption of biomedical practices outside of a biomedical setting may not lead to the best outcomes. A simple example is that of cutting the umbilical cord, as reported on by

Bastien in his dialogical work with healers and biomedical peronnel in the Highland region of Bolivia. Teaching midwives to cut the cord with scisssors has resulted in increased rates of neo-natal tetanus, since scissors are more difficult to sterilize than the traditional broken ceramic (Bastien, 1994: 134).[2] These kinds of precedents suggested that the project should take care to look out for areas where 'traditional' birth care has in fact incorporated biomedical practices and thinking.

The project set out to investigate 'appropriate birth technologies' for rural and migrant women. The notion of 'appropriate' technology implies firstly, that birth care practices should both mesh with the cultural worldview of those giving birth, and secondly, that they should utilise existing resources. It is possible within Bolivia to find a wide spectrum of views of childbirth, which range from the 'technological' view of birth set out by Davis-Floyd in her study of the USA (1992), to ones that are rooted in an Andean cosmovision of the relation between the sky and the earth (see Chapter 2 of this report). However, if we posit too close a fit between these polarised visions of birth and the corresponding birth practices, then we will be unable to account for change. It is abundantly clear that the organisation of childbirth in Bolivia is undergoing very rapid changes at the moment. These changes are the result both of unplanned processes of migration and upward social mobility, and also of large-scale planned interventions by government and non-governmental organisations, backed by international organisations and finance.

It was a premise of this project that if policies aimed at improving birth care for rural and migrant women are to be 'appropriate', they should build on, and with resources that are available within these communities. We therefore aimed to start from women's experiences of birth in traditional home settings, in order to see what resources are available, both theoretically, in terms of thinking about birth, and in practice, in the social organisation of birth care. The vision of hospital birth was to be seen through the eyes of women who have a foot in both systems. Since other studies had pointed to husbands or partners as the major birth attendant in the Andes, men's view of childbirth and their role in it was also a focus of research, as well as that of specialist birth attendants. Seen within these parameters, enough information was available in previous studies to show that there are coherent systems of understanding birth and providing birth care in place in traditional cultures, and that these systems are given strong allegiance by women in rural and peri-urban contexts.. The challenge was to accept that these systems are not, at present, solving the problem of maternal mortality, but to find ways in which they could be made central, rather than marginalised, in the building of long-term solutions.

2 One could add that the particular ceramic used for cutting the cord is one that is used only for toasting grains, and is therefore frequently heated to relatively high temperatures.

Therefore, this report will argue that the most effective immediate improvements for maternal health will be achieved by employing a social model of birth which supports existing traditional strategies that are beneficial, with the addition of essential emergency biomedical services to further support women. This is a model that makes good social and economic sense. It is also one which can fit in well with current reviews of national and regional maternal health policies in Bolivia. The longer-term work must be to alter the basic problems of poor health and poverty women face, and so work towards achieving a wide-ranging definition of women's health which reflects their total well-being.

1.4 Planning for birth care

1.4.1 The demographic context

The project took place during a complex period of policy changes and population trends which will affect childbearing women for some time to come. In 1994, the Bolivian government launched its programme to reduce maternal mortality, *Plan Vida*. The plan aims to halve maternal mortality rates over the next five years. The government has made a western-style hospital and health care system, with obstetrics as the principal speciality, central to *Plan Vida*, one that is broadly in line with recommendations from the World Health Organisation.[3] These, in turn, are a result of the Safe Motherhood Initiative. The Safe Motherhood Initiative, launched in 1987 by the WHO, argues that a reduction in maternal death can be achieved through increased supervision of births by biomedically trained health care staff. (Bolivia, Ministerio de Desarrollo Humano, Secretaria Nacional de Salud, 1994a).[4]

The total fertility rate has been dropping in recent years and now stands at 4.8. However, 60% of the population of 6.8 millions is under 25 years of age, while over 40% is under 15 years of age. Therefore, even though on the average women already have fewer children and a smaller completed family size than in the past, the cohorts of childbearing women

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3 In order to achieve the spectrum of services which are part of the biomedical model of birth, much of *Plan Vida* entails setting up mechanisms for the collection of statistical information, developing standards and norms for training, evaluation of the Plan's progress and so on. In other words, a major objective of the Plan is to systematise its health care for women through the expansion of its current infrastructure to take on these new tasks and objectives. The benefits of this investment inevitably will be more long-term and as a consequence of these necessary structural demands, direct expenditure on maternal mortality is relatively limited in the five year programme.

4 Like many other countries outside the economically developed west, Bolivia is forced to carry a heavy debt. This currently totals 4.1 billion US dollars, comprising 432% of Bolivia's total legal export trade of goods and services (van Lindert and Verkoren, 1994),

will be expanding. This increases the difficulty and expense of achieving a western-style hospital care system for all.

1.4.2 The cultural context

The project set out to see whether the skills and knowledge base of traditional midwives, or *parteras,* is under threat, not least because the government is not enthusiastic about supporting and encouraging a system which is seen to be out of step with western obstetric biomedicine. It was also hypothesized that childbearing women will face complex and often unspoken problems to do with race and language. It is common for country people to be seen as 'Indians', a term whose negative connotations reflect social and cultural divisions as much as racial ones, but which is often understood in racial and ethnic terms. Quechua is spoken by 34% of the population and Aymara by 23% (van Lindert and Verkoren, 1994: 73).[5] This population is often in conflict with medical doctors and most health care personnel who come from the creole and mestizo groups in society. Many of these medical personnel speak only Spanish and many retain strong beliefs that the indigenous communities with their adherence to their own culture, language and traditions are impeding the country's progress. Covert and overt forms of racism are part of people's daily experiences.

The project therefore set out to examine the concrete impact of these beliefs on the provision and quality of birth care. Women from rural communities, or *campesinas* as they are called, must often deal with Spanish-speaking medical personnel who are from another class and outlook. The project aimed to see whether these differences create disadvantages and problems of communication.[6] Among the cultural differences, for example, are the positions women use during labour and birth in the countryside. The policies of most hospitals tend to discouage positions other other than the so-called lithotomy or gynaecological position in giving birth (women lying on her back, feet up in stirrups). Previous studies reported fear as a more important disincentive for attending biomedical birth care than economic cost (Pereira Morató, 1991; cf. GS/TAHIPAMU, 1994). The project therefore aimed to see how cultural differences around practices such as birth position entered into the elaboration of 'fear' in hospital birth.

5 1% of the population speaks Guaraní and 1% other native languages, while 3% speak a foreign language, mainly Portuguese (ibid.).

6 After the 1952 Revolution, universal suffrage was granted and other deeply discriminatory measures against the indigenous communities were ended. The highly pejorative and racially laden term *Indio* was replaced by *campesino*: literally a person who lives in or comes from the countryside.

Therefore, a major task for this project has been the initial identification of traditional practices which are beneficial for women's health. The point of comparison here has been the 'physiological model' of birth as developed by professional midwives and sustained by research (Begley, 1990, etc.). This model has much continuity with the practices of traditional midwives in areas such as the Bolivian Andes. It has the advantage over traditional practices of being now subject to rigorous evaluation through controlled case-study trials of some of its practices. However, it has in common with traditional practices a holistic approach to birth, and as such, research which isolates specific practices will tend to underestimate benefits of the whole.

1.5 SUMMARY OF BACKGROUND ASSUMPTIONS

The review and analysis of fieldwork data in this report are presented in the light of the following factors and assumptions:

1. That the current coverage of women giving birth by the state health care sector, including the work of NGOs, based on a tiered system of hospital and health centre services, is just under 50% of all births, with only 25% of women in the rural areas being attended by state health care personnel (*Instituto Nacional de Estadística*, 1994);[7]

2. That there is in existence a coherent system of Andean traditional medical care, with an extensive diagnostic and therapeutic range, which local communities are anxious to retain and to continue to use, and which is recognised by the Bolivian government;

3. That running parallel to this system is a strong obstetric profession, with a complete absence at present of professional midwives, and an unusually small group of nurses[8] trained to carry out childbirth, within the state health care sector;

4. That the women most subject to maternal morbidity and mortality are either at the periphery or outside the state health care system; they become users of that system in part because they do not have easy access to traditional forms of care;

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7 The term "state health" care services, is used to designate those forms of health care which are based on western systems of health care and includes the public health services, the health services available under social security, the health services run by NGOs and churches with the permission of the state, and private biomedical health services.

8 The comparison implied here is with health care systems of countries of the North, rather than with the Latin American model provided by Brazil and Argentina, with which Bolivia is in line (See Chapter 6 of this report).

5. That there are problems of communications, transport and geographic location which make utilisation of centralised hospital services in the case of serious complications in some areas extremely difficult;

6. That there is a pressing need to utilise resources which are already in place and to preserve and build on indigenous health and social systems, the marginalisation of which would leave women very much more vulnerable and which would carry enormous social and personal costs.

1.6 Structure of the report

The report is divided into four parts, of which this introduction is the first. Part II presents an overview and analysis of the field studies in Bolivia, concentrating on the findings that emerged from the first, qualitative stage of the work. Part III sets this work in the context of international debates on maternal mortality and the role both of obstetric practices and of traditional midwifery in its reduction. And Part IV summarises the conclusions and recommendations of the report as a whole.

1.6.1 Chapter outline

Chapter 2 describes the field studies, starting with their aims and objectives, and then detailing methodology, organisation, internal reporting, and public dissemination of the results. It contains detailed listings of all the institutions working on the project team, and of all internal reports produced by the project.

Chapter 3 documents the traditional system of birth care, as described primarily by the teams working in rural areas, and supplemented by work from the peri-urban areas. It looks both at socio-religious and practical aspects of birth care, and describes both the ideal vision of birth care from within traditional culture, and actual experiences of birth recounted by women.

Chapter 4 describes and analyses migrant women's experiences of hospital birth in the peri-urban areas. It looks particularly at continuities with traditional concepts of birth care in women's understandings of hospital practices and interventions. It also looks at instances where women appear to 'resist' conformity to institutionalised childbirth. Caesarean rates are examined, and the influence of traditional fear of the Caesarean over the acceptance and negotiation of alternative practices is analysed.

Chapter 5 looks at comparisons between home and hospital birth as they emerged from women's views and experiences of both systems in the study data. It documents traditional midwives' view of hospital birth and of hospital practices as diametrically opposed to their own; and it looks at some results of comparable factors from the quantitative study.

Chapter 6 looks at the relationship between the two systems of birth care, encompassing provision and up-take of both systems at national and local levels, some discussion of the experience of midwife training programmes, and three case studies of ways in which traditional midwives relate to the institutional medical system.

Chapter 7 draws conclusions from the field studies on how to conceptualise the present situation of overlapping systems of birth care, and on what strategies for reducing maternal mortality may usefully be pursued in responding to local concerns using local resources.

Turning to the biomedical view of maternal mortality and how this is taken up by public health planners, Chapter 8 looks at the global problem of maternal mortality and how it has become a central concern for international health programmes in the last decade.

Chapter 9 presents the current situation on maternal morbidity and mortality in Bolivia, and examines extant research on these problems. It also considers some of the strategies which have been developed to reduce maternal morbidity and mortality.

In Chapter 10 there are reviews of the current thinking about maternal mortality in international health policy programmes and within biomedicine. It considers three different approaches to maternal mortality: tackling the factors of poor socio-economic and health status while preserving the role of midwives in handling birth; erecting a western-style biomedical model of antenatal care, hospitalised birth and risk assessment during pregnancy and birth; and finally, providing facilities that offer essential or emergency care as close as possible to where women live.

Chapter 11 reviews the biomedical arguments about risk and what factors may predispose women to the risks of maternal morbidity and mortality. There is a detailed discussion of four of the principal causes of illness and death in childbirth (see also Maine, 1991) with which this project is concerned, how these complications are viewed in current obstetric

writing, and how they are seen to link into the western-style model of biomedical care for women.[9]

Chapter 12 examines the way empirical midwives or traditional birth care attendants are viewed in international health policy programmes and related research findings, with an emphasis on projects where good working relationships have been established with empirical midwives. It also examines how the Bolivian government has responded to the issue of training empirical midwives to date.

Chapter 13 comprises an overview of the quantitative data from all the teams regarding place of birth, birth practices and birth outcomes, the principal results of a questionnaire administered to 298 women in ten different fieldwork sites. It assesses the reported practices, both traditional and biomedical practices, in terms of their effectiveness from the points of view of women themselves and also in terms of current international recommendations. It concludes with a discussion of the responses women offered about why they choose to give birth at home or in hospital.

Chapter 14 presents data collected from medical personnel in hospital and health care centres in the course of fieldwork so as to gain a clearer picture of how childbirth practices, already described by women, are dealt with from the biomedical perspective, most especially those which are viewed as complications of labour and birth. Using the most recent evaluations of obstetric practices available, it considers obstetric practices in terms of their effectiveness or otherwise in preventing complications that might lead to maternal morbidity and mortality and whether they address women's actual needs.

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The report will move towards the conclusion that there are many strengths in the traditional systems and methods of care women currently use outside the institutional health care sector. The challenge for everyone working in maternal health care, policy makers and practitioners alike, is how insights and practices from the different systems of health care can be brought together, not in a setting of vertical integration as in the western model, but in a horizontal model where the knowledges and skills of community-based midwives, healers and family members are an active component of the maternal health care system. Unless and until this happens, the two outstanding reasons for failure of the institutional health care system to respond effectively to the most vulnerable women —the dual problems of insufficient coverage and insufficient take-up— will remain untouched.

9 The project has focused on childbirth practices and therefore has not looked specifically at the problem of deaths from unsafe abortion, which is one of the five direct causes of maternal mortality.