

Challenges to maternal health care utilization among ethnic minority women in a resource-poor region of Sichuan Province, China

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Accepted 7 October 2009

We present a simple descriptive study of maternal health care utilization among ethnic minority women in a remote region of China. Factors that affect women obtaining care and their decision-making are explored. Results show that utilization of maternal health care services is associated with a range of social, economic, cultural and geographic factors as well as the policies of the state and the delivery of services. Utilization is not necessarily increased through easy access to a health facility. We identify potential for improving utilization through developing the role of village-based health care workers, expanding mobile antenatal care clinics and changing the way township hospital services are provided and funded. This would include modifications to rural health insurance schemes. Several of these changes are achievable at the township or county level. The findings of this study provide insights that can be used by local health providers, planners and decision-makers to improve the provision of maternal health care services to ethnic minority women.

Keywords Maternal health care services, health care utilization, ethnic minority women, resource-poor remote region, China

KEY MESSAGES

- Current policies that impose punitive measures on struggling township-level staff for not reaching impossible targets for hospital births in this rural region of south-western China counter attempts aimed to increase hospital births. A reconsideration of policies and greater professional and financial support is required. Improvements will only be realized with increased government support.
- Antenatal care is received by only a minority of women in this region of China and postnatal care is even less common. Women are staying at home for reasons of cost that extend beyond the costs of hospital birth itself, the poor quality of township hospitals, the cultural inappropriateness of birthing practices that cause women discomfort and embarrassment, and lack of incentives such as pain relief during labour. Accessibility, while a factor in determining utilization of services, is not as important as is often assumed.

Introduction

Maternal health outcomes among ethnic minority women in China remain poor (Zeng W, 2007, personal communication, Chengdu). Maternal mortality in China has dropped from 89 per 100 000 in 1990 to 47.7 deaths per 100 000 in 2005, but the difference between rural and urban areas remains large (China National Maternal and Child Surveillance Office 2006). Measures of maternal death are disturbing, with maternal death highest in rural and remote areas where minority women live. Globally, maternal death and disability remain unacceptably high despite over a decade of effort to reduce these. One of the goals of the Millennium Development Project is to reduce maternal death by 75% by 2015 (United Nations 2000). Utilization of maternal health care services generally reduces maternal mortality and morbidity. However, the provision of maternal health services to rural and remote communities presents a global challenge. This study examines the maternal-health-seeking practices of minority Yi and Mong women in a remote resource-constrained region of Sichuan Province, and recommends strategies for increasing the use of services.

Global experience shows that minority groups are generally dominated by more powerful majorities (Taylor and Flint 2000). Women within minority populations experience double discrimination (Petchesky 2003). Active prejudice is not always present; benign cross-cultural confusion can also cause poor health outcomes (Fadiman 1997).

China is home to 55 ethnic minority groups. The national census of 2000 showed that ethnic minority peoples totalled 104.49 million and accounted for 8.41% of the total population of China (State Council Information Office 2005). The outcomes for these women differ from the Han majority (Gao 2008a). The need to invest in improvements in health services and medical insurance schemes in rural China, where most minority people reside, is a priority of China's Eleventh Five Year Plan (2006–2010) (CPC Central Committee 2005).

We have been conducting a hospital-focused research project on maternal health care services with partners in two Chinese provinces since 2004. The study reported here was jointly developed by Chinese and Australian researchers. This is a qualitative study of the influences on women's maternal-health-seeking behaviour and utilization of services. It also reports challenges experienced by health workers, managers and administrators who struggle to provide basic maternal health care services under difficult circumstances and within policy constraints. A goal of the Chinese Government is to improve the quality and use of maternity services (CPC Central Committee 2005). Our overall aim was to inform health system development; our objectives were to explore factors influencing ethnic minority women's decisions to obtain care and to then consider what feasible changes could be made to encourage women to make greater use of local services.

Ethics clearance (No. H05071) was obtained from the Charles Darwin University Human Research Ethics Committee and the Ethics Committee of the West China University Hospital of Sichuan University. Verbal consent was obtained from all participants and the very few women who expressed reservations in talking with researchers were excluded.

Subjects and methods

The study setting

Xinjie township (a pseudonym) lies in southern Sichuan Province in the foothills of the Himalayan mountain range. The nearest city is located 3 hours drive away along winding precipitous roads. A large Maternal and Child Health (MCH) Hospital is located there. A County General Hospital, another MCH Hospital and a Chinese Medicine Hospital are located a further 30 minutes drive away. Women in need of emergency obstetric care (EmOC) are transferred either to the hospital in the city or to a closer and better equipped township hospital about 1.5 hours drive along a mostly unsealed road.

Xinjie is surrounded by 11 small villages. The total population of the area is 11 600. Within China's three-tiered health care system, the township hospital is responsible for providing health care to these surrounding communities. Villages are accessed by winding roads, most of which are unsealed and in poor condition, or on foot. Motorbikes, small trucks and tractors are the most common forms of transport though these are in short supply. The most distant village is over 2 hours away by road in good weather (20 km) plus a further 30 minutes on foot.

Over 80% of the population belong to minority ethnic groups, predominantly Yi but also Mong, and Naxi (Harrell 2001). The remaining population are Han Chinese. Local marriage practices mean that most married women have come from distant villages near other townships to live with their husband and often his family. The large majority of people in this region are subsistence farmers with a diet dominated by potatoes and supplemented by occasional chickens, eggs and pickled vegetables. Some farmers also earn cash by selling produce or working as builders or labourers.

The 12-bed township hospital has been operational for just over a decade. Fifteen of the 18 staff are Yi, one is Mong and two are Han. Fifteen are male and three are female. Most medical staff have a 3-year associate degree from the city university and have gained further qualifications while continuing to work as health professionals. Others have certificates from the university's earlier incarnation as a 'sanitary school'. Only one staff member is trained to perform Caesarean sections. The MCH record keeper is a Mong woman and the daughter of a local traditional birth attendant (TBA) who, over past years, has delivered more than 20 babies. The hospital does not have an ambulance. Transport via two motorbikes or a hired car enables the hospital to provide travelling clinics to villages. According to hospital records, in 2006, 22 women gave birth in the hospital and another six were transferred to larger hospitals for emergency care. All 22 mothers lived and one infant died.

Early in 2007, 10 village 'messengers' were appointed by the township hospital and based in surrounding villages. The role of village messengers is to provide MCH and illness prevention education for women and to keep records of pregnant women which are passed to the hospital. Hospital staff hope to expand the role of village messengers in the future to include the provision of postnatal care and birth assistance. At the time of the study, six male and four female messengers were operating. Low levels of literacy among women prevent more women assuming this role.

Table 1 Characteristics of all women interviewed

	No.	%
Age of woman at time of study (years)		
15–19	2	3.6
20–24	11	19.6
25–29	10	17.9
30–34	13	23.2
35–39	5	8.9
40–44	2	3.6
45–49	1	1.8
50+	12	21.4
Total	56	100.0
Woman's occupation		
Farmer	48	85.7
Trader	6	10.7
Teacher	1	1.8
Hairdresser	1	1.8
Total	56	100.0
Woman's education		
Illiteracy	7	12.5
Some primary	39	69.6
Primary	6	10.7
>primary	4	7.1
Total	56	100.0

Sample

Semi-formal interviews were conducted during March and April of 2007 with 56 women (at times in the company of their husbands), including seven TBAs. Also interviewed were two male traditional healers/astrologers, one *bimo* and one *sunyi*. While not TBAs, these practitioners also attended to the wellbeing of pregnant and birthing women. Most of the women interviewed were Yi ($n=46$), nine were Mong and one was Han who had married into a Mong family. Two younger unmarried Yi women were included in the sample. The ages of women interviewed ranged from 17 to 85 (approx.) years (see Table 1). Most interviewees (92.9%) only had limited primary school education and most (85.7%) were farmers. The total number of live births among this sample of 56 women was 118. At the time of interview seven of the women reported being pregnant; three of these with their first child, two with their second and two with their third child.

In order to examine more closely the decision-making processes of women who had some means of accessing a hospital birth as well as traditional methods, we chose to undertake a more detailed analysis of births that had occurred during the 10 years prior to the study (1998–2007), which correlated with the lifetime of the township hospital (see Table 2), as well as current pregnancies. Women in this smaller sample number 34 with a total of 62 live births. The age range of this group was 21–38 years with an average age of 28 years. Interviews were conducted in the township and in three villages selected for their contrasting degrees of accessibility to the township. The most distant village was 20 km (2 hours)

Table 2 Place of birth by age of child 1997–2007

Age of child (years)	Place of birth (% of age group)		Total
	Hospital	Home	
<1	5 (50)	5 (50)	10
1–2	1 (12.5)	7 (87.5)	8
3–5	0 (0)	16 (100)	16
6–10	0 (0)	28 (100)	28
Total	6 (9.7)	56 (90.3)	62

away by poor road and the closest was 20 minutes by sealed road. We identified interviewees through snowball sampling. The TBAs we interviewed were encountered through snowball sampling of women who had given birth to children. They were not purposively sought.

Interviews were also conducted with five health workers at the township hospital, six managers and staff at the County MCH Hospital and General Hospital in the County, and two administrators at the County Bureau of Health to gain their views on local maternal health care needs and challenges to improving services. *En route* to the township, opportunistic observations and informal interviews were conducted with MCH workers from other township hospitals and village health posts.

Records for all 22 births that occurred at the township hospital and the six cases referred to other larger facilities for 2006 were audited using tools we had previously refined for use in rural China and translated into Mandarin (Harris *et al.* 2007). The audit identified characteristics of women using services and the care they received (Harris *et al.* 2007).

Data collection

Interviews were conducted where women were comfortable: in their homes, shops or, in two cases, on the street. As we interviewed women, friends would gather and individual interviews would often expand into group discussions. In most cases men were not present but were welcomed towards the end of the interview if women wished this. Again, interview guides were jointly developed by Australian and Chinese researchers and refined prior to conducting interviews.

We asked women about their pregnancies and births: where they gave birth and why, who was with them during labour and birth, the role of each person present, their birth experience, pregnancy and antenatal and postnatal care. We also inquired about sources of knowledge and advice, decision-making in their household around pregnancy and birth, what they did if they encountered difficulties during labour, their knowledge of other women who had had difficulties and any maternal deaths. We asked women about their use of and views on government and private health care services and medications, and we collected some demographic data. We asked those who were TBAs about their work, the women they had helped, the children they had brought into the world, their practices and their relations with their clients and the government health care system. Lastly, we asked women what they would like from the health care system to support them in pregnancy and childbirth.

In our paper we have attempted to portray the views of the women we spoke to as accurately as we can. In doing

so, however, we have remained mindful of the fact that our data are subject to recall bias, particularly that which comes from older women as they may struggle to recall the details of circumstances surrounding the birth of their children. However, as our discussion is mainly centred on those women who have given birth during the 10-year period prior to the study, we do not consider this bias to be significant.

Interpretation and collaboration

As most women had, at best, only partial primary level education, surveys were not used. The majority of women interviewed were Yi speakers so questions were generally asked in Yi and responses translated into Mandarin and then English. The health workers at the hospital were among the few people in the region who could speak both Yi and Mandarin and our presence in the area was at their discretion. Using translators from the township hospital also enabled the local staff and authorities to monitor the questions we asked and our movements. Therefore, despite disadvantages in using health workers to pose questions to service users, particularly when interviewees belong to a vulnerable minority population whose practices may conflict with government objectives, we worked with local professionals who interpreted for us. We undertook limited training of our Yi interpreter, a young female obstetrician from the township hospital, to help her understand the purpose of the research and the information we were trying to generate. She asked all the questions of Yi-speaking participants.

On a few occasions the presence of our translator appeared to make women uncomfortable and curtail their responses, particularly if they had given birth to their children at home. However, the situation also had its advantages as her presence provided opportunities for women to ask her about health insurance, health system policies and hospital practices. This enabled us to observe the informal dynamic between health worker and client, and to also assess levels of knowledge among women and what they wanted to know.

While our local health worker translated Yi into Mandarin, co-authors Zhou Yun and Liao Hua, health professionals from the provincial capital, translated from Mandarin into English for the benefit of Amanda Harris, the anthropologist. Thus interviews were translated back and forth across three languages, taking notes in Mandarin and English and engaging in an iterative process of interpretation across researchers. Field notes kept in both Mandarin and English by Zhou Yun and Harris were reviewed and discussed by the team at the end of each day, and a compilation agreed and reviewed. In this study, translators were undisputedly also active research collaborators (Larkin 2007). Collated interview data were analysed according to themes and key phrases, and frequencies of response categories were cross-referenced to the existence of the township hospital. Responses were also examined according to age groups and distance of place of residence from the township hospital.

Results and discussion

Our results are presented and discussed below. We begin by looking at where birth occurs and the attendant at birth for these minority women, followed by a discussion of antenatal

and postnatal care. We then move to examine some of the key determinants of maternal health care utilization that emerged in this study. These include access to services, the quality of services, costs associated with their use, insurance and drug use, the access women have to traditional maternal health care knowledge and expertise, and finally, some implications of higher level policy.

The place of birth and the birth attendant

Encouraging hospital delivery in the presence of a skilled birth attendant has been a key strategy for reducing maternal mortality (Liljestrand 2000). Providers of health care in rural China are under pressure from government to increase the number of hospital births in their regions. Pregnant women in all parts of China are encouraged to travel to hospital despite possible difficulties with cost, quality of care and transportation (People's Daily Online 2002). The goal of the Chinese State is to eventually see all women deliver their children in hospital. Provincial and local officials and health professionals interviewed freely admit that achieving this national goal at the local level will be extremely difficult. Local MCH workers' records are scrutinized closely for compliance. Township staff interviewed reported having salaries cut if goals for hospital births were not achieved. Their frustration lies both with higher levels of administration that fail to provide adequate resources to small township hospitals and with local women who, they report, frequently disregard their efforts to encourage hospital birth.

Birth at home in the company of female family members and neighbours is still widely practised and preferred by almost all women in this study. This study suggests that the shift to hospital birth is very recent, and has only occurred within the 3 years prior to the study, i.e. around 2004. Table 2 shows that only six (9.7%) of the 62 births occurring since the township hospital was operational took place in a hospital or a clinic in the presence of a skilled birth attendant. These women, with ages ranging from 21 to 38, included four younger primiparous women and two older biparous women whose first children were born at home. An earlier study in neighbouring Yunnan Province confirms very limited use of health services by Yi women, with only 17% delivered with a skilled attendant (Fang 2004). The other 56 (90.3%) births occurring during the lifetime of Xinjie township hospital took place at home in the company of female relatives, neighbours and/or a TBA. All women who gave birth before the existence of the hospital reported that birth at home was their only option due to the distances that needed to be covered to reach another facility, the poor condition, or lack, of roads and inadequate transport.

The most usual birth attendant at home was the mother-in-law. Many women wanted to have their mother present but this was rarely possible due to local marriage practices that meant that married women normally lived in villages some distance from their place of birth. Often the woman's sister or her husband's sister would also accompany her. In the majority of cases, a woman who had previous experience in assisting in birth was also present. In nearly all cases, a woman's husband remained close by but outside the birth room, which is a female domain. He prepared food and was ready to call for a TBA, *sunyi* or *bimo* if the woman encountered difficulty.

We encountered only one exception to this gender separation in our sample where the woman was comfortable with her husband's presence during her birth at home. All women in our sample who gave birth in Xinjie hospital were accompanied by family members. In one case, three people accompanied the mother until birth: a TBA, the woman's mother-in-law and a female doctor. In the other five cases, the doctor at the hospital was male.

Xinjie hospital records show 22 births occurred in the hospital in 2006, with a further six cases transferred to larger hospitals for EmOC; a total of 28 hospital births for the year. The reasons for the transfers were placenta praevia, post-partum haemorrhage, preterm rupture of membranes, abnormal foetal presentation, retained placenta and prolonged labour. According to the township hospital's MCH worker, there were 111 births in the region in 2006. This would mean the 28 hospital births comprised 25.2% of total births for 2006. The hospital appears to be claiming a higher rate of hospital birth than our investigation could corroborate. This is likely to be related to targets imposed by District authorities for numbers of hospital births.

Antenatal care

Access to antenatal care (ANC) is recent in this region. The majority (79.4%) of women in our sample who had children born within the 10 years prior to the existence of the hospital report receiving no ANC for any pregnancy. The nine women in our sample who did receive ANC for a total of 11 pregnancies did so within the 4 years prior to the study. In six cases only one ANC visit (which we define minimally as comprising one or more aspects of care, such as an ultrasound scan) was received, and in only three cases were three or more ANC visits made.

Xinjie township hospital staff encourage women to seek ANC. Within the last 2 years, the hospital has begun providing ANC to women in their villages through travelling clinics using a hired car, visiting three to four villages each month. Villages are selected after a call to the nearest village messenger to find out whether there are any pregnant women in the area. The acquisition of a portable ultrasound machine by the hospital has been a strong attractor for women using this service. Sometimes women attending are encouraged to also come into hospital to receive more thorough examinations. Our study confirms that some women were heeding this advice as our sample includes seven women who were attending ANC appointments at the hospital after receiving advice to do so from travelling hospital staff.

Components of ANC reported by hospital staff and by women differed. Hospital staff report that all women who received ANC received blood pressure checks, a pelvic examination, ultrasound scan and check of fundal height. The township hospital can also perform haemoglobin and urine tests. Three women recalled receiving care components including palpation and foetal heartbeat. In all other cases women reported receiving ultrasound scans only. One woman who had five ANC visits reported that this consisted of five ultrasound scans only.

In the villages surrounding Xinjie, there is a positive impact of providing ANC through travelling clinics. It provides many women with the only chance they have to receive care without consuming scarce resources travelling to Xinjie. They see it as

an opportunity to learn more about MCH or have the new insurance scheme demystified. The provision of an ultrasound machine provides women with a positive 'medical' experience, seeing an image of their unborn child. We interviewed three women who reported that a key reason for giving birth in hospital was the advice they received from doctors who identified their pregnancies as high risk during a village clinic. It appears that women who seek out ANC are also more likely to choose a hospital birth, but this of course is not a complete explanation. While the literature associating ANC and pregnancy outcomes is mixed and the limitations of ANC to predict obstetric emergencies are being realized (Onah *et al.* 2006; Magadi *et al.* 2007), our findings concur with others who have found high levels of ANC use are likely to be associated with the use of safe delivery care, hence, reduced adverse pregnancy outcomes (Bloom *et al.* 1999; Abour-Zahr and Wardlaw 2003; Magadi *et al.* 2007). Findings from a study in southern India suggest that multipurpose health workers posted in rural areas who provide antenatal and postnatal care and information on services related to MCH regularly to households have increased the number of women receiving ANC (Navaneetham and Dharmalingam 2002). Potential in this regard lies with the new village messenger system in this area of southern China.

Women in this region are not charged for ANC. As a non-revenue-raising service, the delivery of ANC in distant villages is financially difficult for this resource-strapped township hospital. Costs in terms of staff time and hiring of transport are substantial. We accompanied staff on several village clinics which were generally well attended. Women told us they would like hospital staff to visit them more frequently. However, on one occasion three disheartened staff members hired a vehicle and travelled 2 hours each way to provide a clinic, only to have no-one attend. Women generally report attending clinics to check the position and development of their child or to confirm a pregnancy through ultrasound; if they experience bleeding or abdominal pain during pregnancy; or if they have problems they associate with a previous birth such as headaches, lethargy or backache.

The most common reason that many women did not receive ANC is that these women did not feel there was any need. Most women interviewed did not perceive childbirth as risky and have no tradition or experience of ANC provided by health workers. Some even associate ANC with an increased risk of having a difficult birth or a stillbirth. Among some communities, doctors are suspected of causing problems for women who have sought ANC, revealing a low level of knowledge about high-risk pregnancies and their management. Some women believe that revealing a pregnancy to others, including health workers, can precipitate a difficult birth. Women also do not connect ANC to subsequent child health problems.

We also encountered three women who avoided revealing an unapproved pregnancy to hospital staff out of fear of being asked to have an abortion. In this way the current Chinese family planning policy could reduce the numbers of women seeking care.

Postnatal care

For only five of the six hospital births occurring within the lifetime of the hospital, and one birth during the same period

that occurred at home, did women report receiving care postnatally from a professional health worker (9.7%). The birth that occurred at home was the mother's third child and third home birth. Postnatal care components for these women included abdominal palpation, checking for abnormal vaginal discharge, condition of the cord, infant feeding and development. Two of these six women received three or more visits within 4 weeks of birth. The policy of the hospital is that postnatal care at home is only provided to women who have given birth in hospital. The reason for the visit to the one woman who gave birth at home may be related to the fact that her birth was outside the allowable two children and possibly staff wished to discuss birth control methods with her. She lived only a few minutes' walk from the hospital. It was not clear why the other women who gave birth in hospital did not receive postnatal care.

Determinants of maternal health care utilization

Accessibility

This study supports the findings of others, that accessibility is not as important a determinant of health care utilization as is widely presumed by local health workers, administrators and policy-makers (Bhatia and Cleland 2001). Of nine women in our sample who lived in Xinjie township, and who gave birth within the last 2 years, only three had hospital births. Five gave birth at home despite easy access to the hospital and one woman chose to deliver in hospital after attempting to labour at home and encountering difficulties. One woman chose to come into town to stay with relatives some weeks prior to her due date so that she could deliver in hospital, but this is difficult for women from distant villages who are reliant on having people who can accommodate them in town.

The poor predictability of access for utilization is supported by an analysis of births in Xinjie hospital during 2006. Among the 22 women who gave birth in Xinjie that year, for whom place of residence was recorded, most (64%) came from distant villages and only a minority (23%) lived 20 minutes or less by vehicle from the hospital.

A closer look at seven pregnant women we interviewed also supports this view. Four of the women planned to deliver at home, one planned to deliver in hospital and one said she would consider delivering in hospital but was still undecided. The other woman was pregnant with her third child and planned to have an abortion. Of those who intended delivering at home, one of these women lived within only a few minutes' walk from the hospital and the other three were less than 20 minutes drive away on a sealed road.

Quality of health care services

Throughout China, township hospitals have suffered under post-Mao reforms and the quality of services and staff is generally lower than higher level county or city hospitals (Kaufman and Saich 2001). A minority of women in this region, like women elsewhere, choose and are able to travel and pay for better educated, more experienced doctors and better equipped facilities further from home. That the township hospital is unable to perform Caesarean sections, keep its own supply of blood or perform other EmOC deters women from delivering locally. Transfers of the six emergency cases in

2006 to better equipped hospitals took between 1.5 and 4.5 hours. Securing funds to buy an ambulance is currently a priority for Xinjie Hospital. Despite substantial efforts by staff to access ongoing education and funds to improve their skills and services, levels of trust among users of this level of the health care system are low.

Birth in the home is a private occasion for women of this region. In contrast, the facilities at Xinjie Hospital are open, sounds are audible from the main street and many doctors at the hospital are male. Not only does gender appear to affect the acceptability of birth in hospital but, according to local belief, the presence of any strangers during labour is commonly believed to result in harm to the mother and newborn.

When talking to most women about the birth of their children, the memory of pain remained foremost in their minds. In their descriptions of pain, there was no discernable difference between those describing birth at home and those who gave birth in hospital. We have found no analgesic or other pain relief techniques used in all of the five rural hospitals we have audited in our larger study conducted across Sichuan and Shanxi Provinces (Harris *et al.* 2007). A further study in Shanxi Province which investigated nine county hospitals found similar results (Gao 2008b). When asked, all women said emphatically they wanted pain relief. Many women also said they would prefer not to be shaved, to be allowed to walk around during labour and to birth in a position akin to the traditional semi-sitting position, which was not available in hospitals. Reform in maternity care in China and elsewhere has frequently been based on 'modern' assumptions without empirical base or without considering social, behavioural and cultural knowledge (Wardlaw and Maine 1999). A reconsideration of practices that are not evidence based, such as pubic shaving and birth in lithotomy position is not simple. This is despite the fact that they are inexpensive and may help some of these women feel more comfortable about hospital birth.

Costs, insurance and over-use of drugs

The Government's new cooperative insurance scheme (Fang 2004) was introduced in this area in late 2006. While most women have joined and have made their yearly contribution of 10 yuan, no-one we spoke to understood how it worked. Additional financial support can be accessed through the poverty assistance scheme, but many women felt reticent about negotiating the paperwork, despite the fact that this was not extensive.

The real cost of hospital birth is likely to considerably exceed insurance reimbursement. Significant costs are incurred for medicines and the insurance scheme only covers the most common of medications. Illustrative is a woman in our study who recently gave birth in hospital and was charged 400 yuan: 150 yuan for the birth and 250 yuan for medicines. She did not know the nature of or reason for the medications she received. With township hospitals desperate to raise much-needed revenue, the risk that drugs will be over-used is substantial (Liu *et al.* 2003). Because costs also extend to paying for transport and accommodation for the woman and accompanying family members, total costs for a hospital birth for a village woman can climb to several thousand yuan.

Access to traditional knowledge and expertise

Women with substantial experience in assisting in childbirth are widespread in these communities and most married women have some level of knowledge. At least seven older women we interviewed had assisted many women in their families and communities, and are considered to be TBAs. These women provide not only assistance at birth, but also advice to women during pregnancy and care postnatally. All of these TBAs reported passing their skills on to younger women. All the women in our sample do not feel they lack access to knowledge and expertise around pregnancy and birth, and therefore do not sense a need for allopathically trained health workers. Government no longer supports any relationship between health staff and TBAs. Reconsideration of this policy may lead to a decrease in delays in receiving emergency care by strengthening the referral axis between traditional practitioners and health workers (Bhutta *et al.* 2008; Ekman *et al.* 2008).

Implications of policy

The frustration of trying to impose birthing services on a local population is shared by policy-makers, health practitioners and women. Social and cultural context and disparities in economic capacity are often not given adequate consideration by decision-makers or researchers (Rice 1999).

Recently, the central Chinese Government has recognized the need for greater investment in rural health care, particularly at the township level which suffered in the reform years (Liu and Rao 2006). Adequate levels of support are not yet reached and some improvements will only be realized with increased government financial support and policy reform.

Conclusion

Levels of maternal health service utilization are very low in this region. ANC is only received by a minority and postnatal care is even less common. We find that accessibility, while clearly a factor given the lack of good roads and transport, is not as important as many presume. Women are also staying at home for reasons of cost, beyond the hospital costs of hospital birth itself; the poor quality of township hospitals; the cultural inappropriateness of birthing practices that cause women discomfort and embarrassment; and the lack of incentives such as pain relief during labour. Extension of the recent initiative of travelling clinics to village women is likely to be beneficial. Experiences from other countries support this view. There is also a need to improve women's understanding of appropriate ANC (including the limitations of ultrasound) and the importance of EmOC. Rather than viewing traditional practitioners as obstacles, working with TBAs and traditional healers may encourage hospital birth. A reconsideration of policies could be helpful. Current family planning policies counter attempts aimed to increase hospital births, and policies that impose punitive measures on struggling township-level staff for not reaching impossible targets for hospital births could be replaced by greater professional and financial support.

Acknowledgements

We wish to thank the many staff of the Bureau of Health and the hospitals of Southwest Sichuan Province who made this research possible and gave their time so generously. We also wish to thank the women and their families who welcomed us into their homes and spoke to us so openly. We are grateful to Charles Darwin University and the Australian Research Council for funding this research and to Dr Suzanne Belton for her substantial contribution to preparing the application for additional funds that made this extension study possible.

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