Is health legislation in China being implemented effectively and is it benefiting the rural poor?

A collaborative policy evaluation project

Report by
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1 Background and Objectives

1.1. Rationale

Health legislation is increasingly being used by governments in developing countries as a tool for implementing policies, including those aimed at improving the provision of health care. In the transition to a market economy in China, legislation has been significantly developed in order to offset the weakening in the central planning mechanism and political control which have historically influenced the behaviour of institutions and individuals in the Ministry of Health. The aim has been to establish a legal regulatory framework to ensure that the interests of the public, including the poor and vulnerable groups, can be protected. National Health Service Surveys over the last decade have shown that inequalities in health and health care are widening in China, as in many countries world-wide. Many anecdotal reports suggest that the implementation of some important health laws in the poor areas of China has been in jeopardy, due largely to a lack of human and financial resources, and institutional capacity[1]. However no specific research has been carried out to investigate the implementation and impact of health legislation which aims to improve access to basic services.

The Maternal and Infant Health Care (MIHC) Law of the People's Republic of China was passed in 1994 and came into force in June 1995. The stated aim of the Law is to 'ensure maternal and child health and improve the quality of the population.' This research project has focused on those aspects of the law relating to the provision of health care services for maternal and infant health.

The MIHC law contains 38 articles outlining health care provision for ante-natal and peri-natal health and guidelines on technical implementation, management and liability. The General Principles of the Law (Chapter 1) require that the state[2] will provide the necessary conditions and material support to make the health service more accessible for mothers and children, particularly in remote and poor areas. (Chapter 1, Article 2). The law states that medical care institutions should provide health care for pregnant women during their pregnancy, during and after delivery and gives details of the content of such health care, its management and supervision. For more details of the content of the law and the institutional structures and responsibilities for financing, managing and providing MIHC services in counties, see Appendices 1 and 2.

[1] See Tang S., 1999. 'Health legislation in China: Do the words matter?' in *International Digest of Health Legislation*, Vol. 50, No. 2.

[2] *Guo jia* or 'state' is used to cover all levels of both government and the Chinese Communist Party

1.2 Research aim and questions

The study aimed to evaluate the implementation of the MIHC Law to examine its impact on improvement of health care indicators in two poor, rural counties in Chongqing Province, China[3]. The impact of the law was evaluated in terms of its effect on access to basic maternal and infant health care services, with a particular focus on inequities.

The specific research questions are:

1. To what extent do people in the poorest rural areas have access to the essential health services guaranteed by the law?
2. What impact has the law had on inequities in access to and financing of the essential health services associated with maternal and infant health care?
3. What are the major social, economic, and institutional factors influencing the effective implementation of the health legislation and access to health care services, particularly at the county and township levels?
4. What are the lessons and practical recommendations for policy-makers aiming to strengthen the effective implementation of health legislation with a particular focus on improving equitable access to basic health care services?

1.3 Background to the study counties

The two study counties, Yunyang and Zhongxian, are both located in the Three-Gorges Dam Area of Chongqing Municipality, which was part of Sichuan Province until 1995. Over 90% of the population of the two counties live in the countryside. Both of the two counties are regarded as poor counties in Chongqing Municipality, although Zhongxian is richer than Yunyang in terms of GDP per capita and annual average net income per rural resident. Zhong Xian has a population of 978,030 (1997). The county comprises of 42 townships (served by 61 township health centres) and 780 villages (served by 737 village clinics) and has an agricultural base with little industry. Yunyang has a population of 1,250,000 of which around 92% work in agriculture. The county has 65 townships (served by 62 Township Health Centres) and 827 villages (served by 860 village clinics).

2 Methods

2.1 Qualitative data

At the national and provincial level, key informant interviews were held with:

1) The MIHC director at Chongqing Health Bureau
2) The Director of Health Economic Research Institute.

[3] Chongqing Province is one of two provinces selected for inclusion in DFID's first major health project in China.

3) The Director of Education, Culture, Health and Sport Committee of National People's Congress.

Three townships in each county were selected to represent different levels of economic development and distance from the centre within each county. One village was selected in each township.

Key informant interviews were held with
1. The Deputy Director of County government (responsible for public health)
2. The Director or Deputy Director of the County Health Bureau (responsible for the MIHC programme in each county)
3. The Director of the county MCH centre in each county
4. The person responsible for the MIHC group in township health centres
5. The village level provider(s) of MIHC services (midwife or doctor)

Individual interviews were carried out in each selected village with at least one woman who had given birth in the last 2 years and one woman who gave birth before the law was passed in 1994.

Focus group discussions were held separately with mothers, fathers and grandmothers in each village.

2.2 Secondary and institutional data

At the county and township levels, MIHC providers provided institutional data using instruments from the National Health Services Survey. An additional data form was designed by researchers for collecting more detailed annual institutional data on MIHC services from 1992 to 2000. Staff in charge of health statistics or MIHC and County MIHC managers supervised the provision of institutional data.

Information was collected at both county and township levels on the following: the number, structure and qualifications of the MIHC service workforce; training provided to MIHC service providers; revenue and expenditure of MIHC facilities; equipment acquired for MIHC services; service capacity; service performance; and maternal and child health outcomes.

For further details of the methodology including county selection, recruitment and analysis, see Appendix 3.

3 Findings

3.1 To what extent do people in the poorest rural areas have access to the essential health services guaranteed by the law?

The study found that in the selected counties the law has had some positive impact on services. Greater priority has been given to MIHC services by local government, health administrators and service providers since the law was passed. Some of the positive improvements in services, such as investment in equipment and provider training are attributable to various external projects in the study counties, which were established and implemented explicitly to support the implementation of the Law.

Table 1. Selected indicators of service use in the selected counties according to the 1998 National Health Services Household Survey (for further detail see Appendix 1).

Service use variables	Yunyang	Zhongxian
% receiving at least one ante-natal check-up	57%	66%
% hospital delivery	30%	26%
% of home delivery assisted by village doctor/ midwife	27%	71%
% of home delivery assisted by a doctor from a local facility	17%	13%
% of women who delivered at home because they did not think it necessary to deliver in hospital	46%	52%
% receiving at least one post-natal care visit	12%	38%

Whilst the majority of women in both counties received at least one ante-natal care check-up, economic considerations were taken into account in deciding how many checks to have. The average number of visits is well below the standard of five set by the MoH, at 2.5 in both counties[4]. There is a significant difference in post-natal care coverage between the study counties because in Zhongxian post-natal care is a service expected by women who deliver in hospital whilst in Yunyang villagers are expected to invite doctors to visit them and will only do so if they feel there is a problem, largely because they expect to pay for this service. The Township Health Centre is the main provider of all MIHC services for the majority. The main reason given for delivering at home was that there was no need for hospitalised delivery, because the birth was expected to be normal. However the lower cost, and the flexibility of payment methods to village doctors or midwives were frequently mentioned in most villages. The distance and poor transport to the facility was given as a reason in some, remote villages, and a minority of respondents cited the poor conditions and/or the poor attitudes of doctors at facilities.

The majority of villagers perceive improvements in MIHC service provision, although in many cases villagers cannot state time frames for reported changes were given. The main changes mentioned which are likely to be attributable to the law are

[4] In the above survey, 10.7-35.5% of women received five or more ante-natal checks.

increased equipment – particularly B ultrasound scanners[5]; and, in Zhongxian county, the loss of licenses for village doctors to deliver babies. Some villagers did comment on increased government emphasis on MIHC. However, few villagers have heard of the MIHC law and most of those who have heard of it are unsure of its contents.

3.2 What impact has the law had on inequities in access to and financing of the essential health services associated with maternal and infant health care?

Inequities in financing of services
There are inequities in the financing of MIHC services at the provincial, county and township levels. For example, allocations to health at the provincial level vary even in similar economic situations. Poverty relief funds allocated to provinces are often spent on economic development rather than subsidising health, and some subsidies from the Municipal Government and International Aid are concentrated in the urban areas. For example 60% of funds from a Japanese project to Chongqing Municipality were allocated to Central Paediatrics hospitals and only 40% to the counties. Local (township and county) governments invest in MIHC services to differing levels. For example in one study county, Township Health Centres receive a subsidy for providing MIHC services from the county government, whilst none is provided in the other.

Inequities in access to services
Initiatives to improve access to services by the poor do exist. For example in Zhongxian county a special subsidy was available for poor families which was supported by the Project to Reduce Maternal Mortality and Neo-natal Tetanus[6]. However in the other study county informants felt that the MIHC law had not improved access to services for the poorest. There is no data on utilisation of MIHC services by the poorest at any level.

3.3 What are the major social, economic, and institutional factors influencing the effective implementation of the health legislation and access to health care services, particularly at the county and township levels?

A number of economic, political and institutional factors served as barriers to the effective implementation of the law.

Firstly, the lack of financial support from government at all levels limits the ability and willingness of service providers to provide some MIHC services[7]. Government

[5] However, according to the institutional data, all new B ultrasound scanners in township health centres were self-funded (though township health centre surplus). B Ultrasound scanners are used for a number of diagnostic purposes in addition to foetal development monitoring.

[6] Local government has set criteria to identify poor and very poor households according to their income per person per year: those classified as very poor receive free services whilst those classified as poor receive a discount (of 100 yuan for delivery). Disabled women receive free services.

[7] This has been a finding of MoH evaluation studies in other provinces such as Gansu and Anhui. (*Implementation of Maternal and Infant Health Care Law in Guansu and Anhui Provinces.* People's Congress. Survey report, 2000).

budgets cover approximately 30% of provider salaries at the Township Health Centres and the remaining income for service provision is gained from service fees. Health projects are often the only source of funds for training and equipment. The Township Health centres receive recurrent budgets from County governments[8] but these budgets are insufficient to fund visits to villages for post-natal care provision, supervision, or training. Few village level providers receive any financial incentives from the township level. The lack of full time professional staff and the low level of skills and qualifications of staff limit the quantity and quality of services provided. Only 10-30% of Township health centre staff are medical school graduates[9]. More training of staff has been conducted in recent years, due to support from relevant projects. However significant differences in the length of training remain between the townships (see Table 4, Appendix 1).

There is a lack of dedicated staff time for MIHC services[10]. Some townships do not employ anyone to manage MIHC services and all MIHC managers carry out this responsibility on a part-time basis. In addition providers spend the majority of their time on providing curative services because they need to generate income to cover their salaries. This can prevent them making visits to villages for post-natal care or education. The lack of female providers also prevents some villagers from using services[11].

The Law asserts that the state will provide the necessary conditions and material support to make the health service more accessible for mothers and children, *particularly in remote and poor areas* (Chapter 1, Article 2, italics added). This should act as a point of leverage for providers, and some informants felt that the MIHC law had enabled them to raise more funds for service provision. However the Law makes no provision for specific mechanisms for financing services. The official Implementation Regulations are vague on the source of finance for implementation, which allows flexibility according to local circumstances, but also provides local governments with the option of focusing on priorities other than MIHC.

Local government is required to give a special subsidy for the provision of health care, but this is not always implemented and MIHC providers have to compete for resources with other political priorities. Although the county government health budget in both counties increased between 1994-97, and the proportion allocated to family planning rose accordingly, the proportion allocated to MIHC did not increase significantly, even after the implementation of the MIHC Law in June 1995.[12].

Financial and managerial power over health service provision through Township Health Centres has been decentralised to the township government level where

[8] Either via the Township government or the County Public Health Bureau

[9] See Appendix 1, Table 3 for an overview of the educational background of staff in township health centres in the selected counties

[10] This has also been a finding of MoH evaluation studies in other provinces (*Implementation of Maternal and Infant Health Care Law in Guansu and Anhui Provinces* People's Congress. Survey report, 2000).

[11] For example, only a two fifths of the villages in Yunyang have female providers with any MIHC training.

[12] The lack of local government commitment to funding MIHC services has also been identified as an issue in other provinces (*Implementation of Maternal and Infant Health Care Law.* Ministry of Health Report, 2000.)

funding MIHC services is also often given low priority. Despite an increase in resources allocated to township health centres by township governments since 1994, there has been no increase in the resources allocated to MIHC services (see Figs 2 and 3, Appendix 1).

The content of the Law does not apply to the Family Planning department, which has begun to provide MIHC services since the Law was passed. MIHC services provided by the Family Planning Department are therefore unregulated and are not included in statistics for monitoring and evaluating implementation of the law. The competition for the MIHC market creates tension and conflict between the Health and Family Planning departments, particularly at the local level. The Family Planning Department are often better resourced but lack qualified staff or recruit staff from the health department. The lack of both qualified staff and regulation suggests that MIHC services provided by the Family Planning department are likely to be of lower quality than those provided in the health sector.

The law is relatively weak in terms of detailed regulations, supervision arrangements and disciplinary power. Regulations to accompany the law have been passed by the Chongqing Municipal Government, but these give insufficient detail about the provision and management of services. The Public Health Bureau is responsible for carrying out target oriented management of the County MIHC centre and Township Health Centres each year. However this process is often weak due to the lack of human and financial resources for supervision and poor transport conditions, as well as poor management capacity in some areas. Salary bonuses and deductions are linked to performance[13]. However there is a great variety in the frequency and level of reporting arrangements actually carried out. Targets set are often unrealistic in the poor areas, encouraging misreporting in the context of punishments for low performance. In practice, assessments of performance are largely qualitative and depend to some extent on the relationship between the evaluator and the manager.

The management and supervision of providers at the village level is even more difficult, partly because of the lack of resource provision by supervising agencies. Village doctors are generally given no financial support by the township level who therefore find it difficult to control their behaviour. Exceptions are two schemes in Zhongxian: one where village teams are given cash incentives to bring women to hospital for delivery and one where village providers who perform particularly well are given an cash award, raised through charging an administrative fee. These kind of measures allow for greater regulation of village providers, although the regulation of providers who are affordable and accessible to poor villagers raises some ethical issues. For example in Zhongxian county as part of a project aiming to increase delivery rates in facilities, village doctors are also fined 50 yuan for assisting a delivery. This may decrease access to any form of delivery assistance for poor families who are unable or unwilling to pay for hospitalised deliveries, but do not qualify for subsidies or are not aware of their existence. In addition the cost of using health centres may place financial burdens on the poor, and prohibiting qualified village level staff from carrying out deliveries may act as a disincentive to the provision of post-natal care services, which they are best placed to offer. No clear

[13] For example, the salary of the THC director can be increased as a bonus for good performance, or reduced for poor performance.

evidence of these potential negative effects emerged during this research but they warrant attention as regulation of providers develops.

There is a low demand for MIHC services, particularly amongst the poor, due to low educational levels, lack of purchasing power, and opportunity costs. The poor economic situation of villagers combined with the charges for services limit their ability to purchase services to the level set by the law[14]. According to the household survey in 1996/7, 17% of those who delivered at home in Yunyang and 16% in Zhongxian, did so for economic reasons. Amongst those who can afford services many need to borrow or to sell crops for cash.

3.4 What are the lessons and practical recommendations for policy-makers aiming to strengthen the effective implementation of health legislation with a particular focus on improving equitable access to basic health care services?

Clear financial support mechanisms are necessary to implement legislation. In this context, suggestions given by informants were: budget investment should be redirected from curative to preventive services; MIHC services should be managed separately through earmarked funds; and MIHC related targets should be included in the township government management assessment by county government to encourage investment**.**

Dedicated and qualified staff are needed to effectively implement legislation. The Law should cover all government departments and institutions rather than be limited to the health department. In this context, the conflict between the Family Planning and MIHC departments and the unregulated nature of Family Planning provision of MIHC services must be resolved. Informants suggest that the FP and MIHC departments should be integrated, especially at the Township level, as has been achieved in some places.

Performance evaluation method needs to be refocused away from punishment towards quality improvement. Technical assistance and direction are more important than a monitoring system linked to individual performance. Special, external supervision arrangements for the law should be put in place.

Specific and detailed implementation regulations are crucial for effective implementation. During the study, new implementation regulations were issued by the State Council (June 2001). However this is insufficient to address the problems. The Ministry of Health and provincial health departments must carefully design more specific regulations (such as detailed financing methods) and guidelines (such as training guidelines), which stipulate the roles and responsibilities of different institutions such as Health and FP as well as local government. The regulations also need to specify measures to discipline those who break the law. However this can only be achieved in a context of sufficient resource allocation for MIHC services, subsidies for the poor, and incentives for unqualified providers to support new regulations.

[14] Amongst providers, estimates of those who cannot afford delivery services range from one third, to half of the population. Most villagers agree that in each village there are some people who cannot afford services.

Finally, health law may only function well as a tool in an enabling context. Sustainable and equitable development is clearly a necessary foundation for efforts to encourage both government, providers and villagers to prioritise preventive care services.

4 Dissemination

Six papers have been in Chinese journals: three in Chinese Health Policy, Volumes 5, 6 and 7 (May, June and July, 2002) and three in Chinese Primary Health Care in volume 6, 7 and 8 (2002). A paper has been drafted in English for submission to the *International Journal of Health Services.*

For the abstracts in English and full texts in Chinese of the Chinese papers published, and the full text of English paper submitted for publication, see Appendix 5.

A Chinese language version of the draft report was sent to two municipality officers and the county directors in each county.

5 Highlights summary

IS HEALTH LEGISLATION IN CHINA BEING IMPLEMENTED EFFECTIVELY AND IS IT BENEFITING THE RURAL POOR?

In the transition to a market economy in China, legislation has been significantly developed in order to offset the weakening in the central planning mechanism and political control which have historically influenced the behaviour of institutions and individuals in the Ministry of Health. The aim has been to establish a legal regulatory framework to ensure that the interests of the public, particularly the poor and the vulnerable groups, can be protected. This study assessed the impact of the Maternal and Infant Health Care Law (MIHC) on access to MIHC services, with a particular focus on the impact on the poor, and the major factors which have influenced the implementation of the law.

The law aims to improve indicators of maternal and child health through developing MIHC services. It sets out the broad responsibilities of health institutions and government to provide a range of services including peri-natal care. This study limited its focus to peri-natal services. The study found that to date the law has had some positive impacts on service provision. However access to MIHC services, particularly hospitalised delivery, remains low for the poorest. There are some initiatives intended to promote access for the poorest groups. However, the cost of services remains a barrier to full service use for many. There are also inequities in the financing of MIHC services. Subsidies from the Municipal Government and international aid are often concentrated in the urban areas and local (township and county) governments invest in MIHC services to differing levels.

A number of economic, political and institutional factors served as barriers to the effective implementation of the law:

- The lack of financial support from government at all levels limits the ability and willingness of service providers to provide MIHC services. Providers focus on curative services which earn more income due to the lack of subsidies for preventive services.
- The lack of full time professional staff and the low level of skills and qualifications of staff limit the quantity and quality of services provided.
- The MIHC Law does not apply to the Family Planning department, which also provides MIHC services. MIHC services provided by the Family Planning Department are therefore unregulated and not included in MIHC statistics.
- The law is relatively weak in terms of detailed regulations, supervision arrangements and disciplinary power. Poor management capacity at the county level also contributes towards this. Weak supervision and discipline is also related to the lack of resource provision by supervising agencies.
- There is a low demand for MIHC services, particularly amongst the poor, due to low educational levels, lack of purchasing power, and opportunity costs.

The study report makes a number of recommendations for the strengthening of the MIHC law, as follows:

- Clarify financial investment arrangements from all levels of government
- Improve human resources quality
- Include MIHC indicators in local government targets to encourage investment
- Make external supervision arrangements for health legislation
- Focus performance evaluation methods towards quality improvement rather than individual reward or punishment
- Strengthen the sanctions available for disciplining offenders. However this can only be achieved in a context of sufficient and equitable resource allocation for MIHC services
- The MIHC law should apply to all government institutions
- Pass specific detailed regulations on the provision and management of MIHC services at the central and local levels

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Appendix 1: Tables and figures

Table 2: MIHC services utilization in 1996/97, National Health Services Survey, 1998

	Zhongxian County	Yunyang County
Prenatal, postnatal and EPI services:		
Prenatal care coverage (%)	66.0	57.5
Average # of prenatal examination	2.5	2.5
Postnatal care coverage (%)	38.0	12.3
Average # of postnatal visit	2.7	2.6
EPI service coverage (%)	40.0	59.0
Average # of EPI service	5.4	3.0
Percentage of Pregnancy with illness	10	11.0
Percent of women delivered in:		
Hospital	2.4	6.8
MIHC station	0.0	1.4
Township Health Centre	21.4	19.2
Clinic	0.0	1.4
Household	73.8	71.2
On the way	2.4	0.0
Reason for household delivery:		
Feel unnecessary deliver in hospital	51.6	46.2
Urgent delivery	22.6	15.4
Economic reason (have no money)	16.1	17.3
Transportation difficult	3.2	19.2
Other reasons	6.5	1.9
Who assisted women when home delivery:		
Doctors of Township Health Centre	12.9	17.3
Village doctor	71	19.2
Village midwifes	0.0	7.7
Person who knew how to help	3.2	3.8
Household member	12.9	51.9
Delivery assistance for home delivery:		
Sterile delivery assistance	25.8	38.5
Traditional delivery assistance	74.2	61.5

Table 3: Education background workforce in Township Health Centres

	All township health centre staff					MIHC staff only
	Medical university/college	Medical School (senior)	Medical School (Junior)	High School (non professional)	Secondary School and lower (non professional)	
Township 1	0	0	7	0	7	Medical School (Junior)
Township 2	0	0	0	2	5	High School
Township 3	0	0	2	0	5	Medical School (Junior) Secondary School
Township 4	0	0	0	2	5	Medical School (Junior)
Township 5	0	0	1	9	2	Medical School (Junior)
Township 6	0	1	6	7	14	High School
Total	0	1	16	20	38	

Table 4: Number of months of training given to MIHC staff of Township Health Centres

	1992	1994	1996	1998	2000	Total
Township 1	1	1	2	1	10	15
Township 2	2	3	3	4	6	18
Township 3	0	0	0	0	6	6
Township 4	0	0	0	1	2	3
Township 5	0	0	1	0	0.5	1.5
Township 6	0	0	0	12	0	12
Total	3	4	6	18	24.5	55.5

Fig 1. Organogram of administration, financing and provision of MIHC services

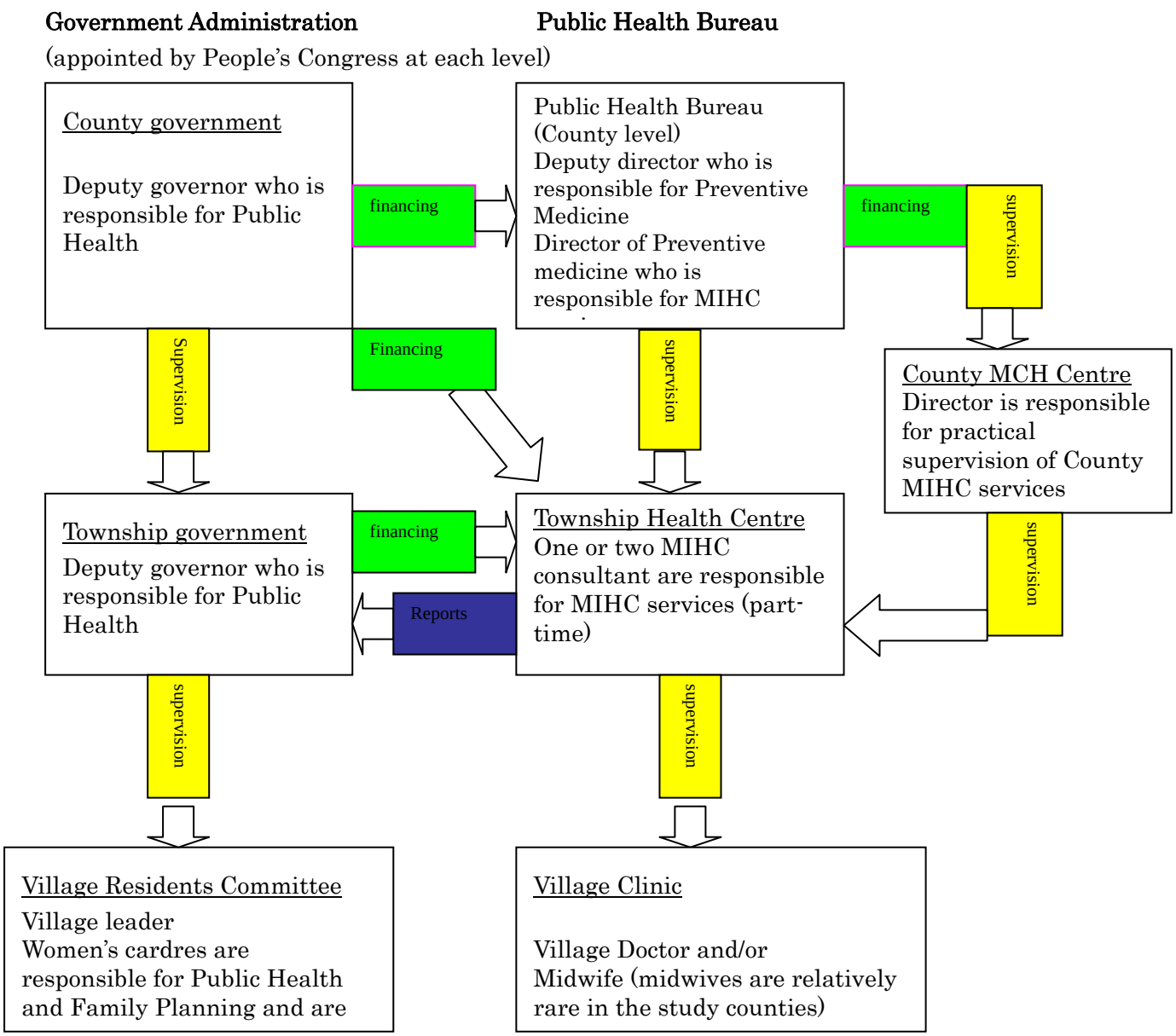


Fig 2: Township government budgets for township health centres (total of allocations in study townships)

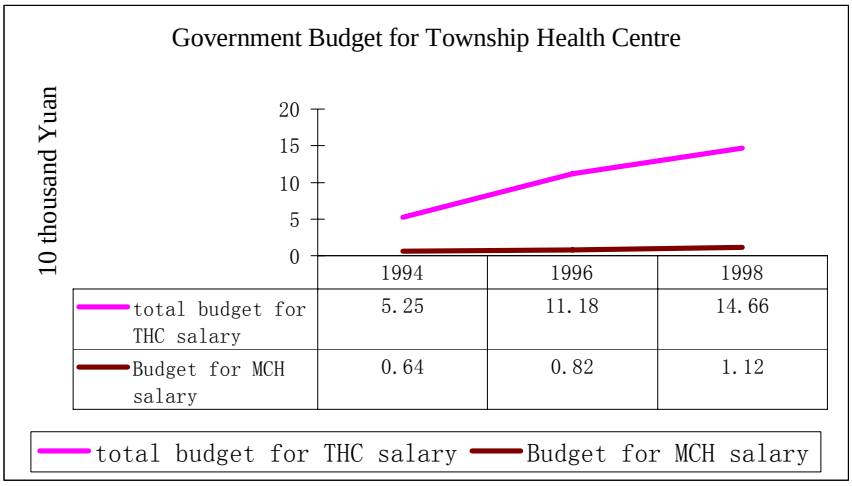
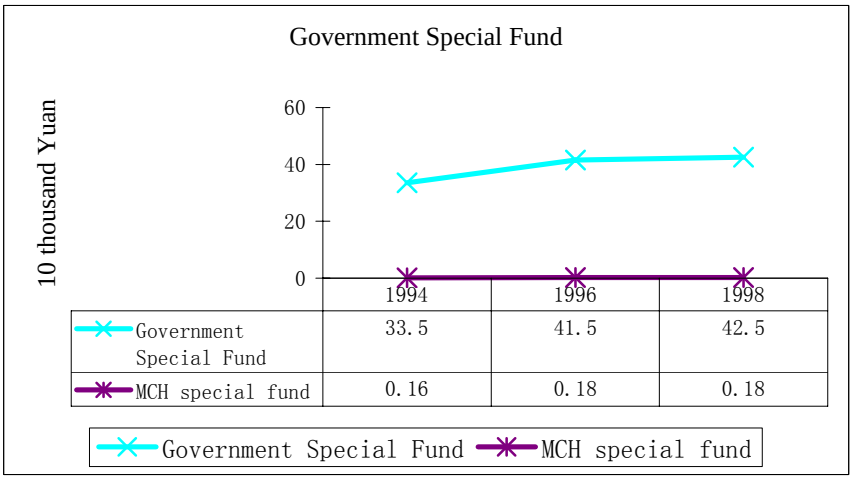


Fig 3: Township government 'special fund'[15] allocations (total of allocations in study townships)



[15] 'Special funds' are one item of the township government budget for township health centres which can be allocated for nominated purposes such as buying a b-ultrasound scanner for a health centre. The 'MIHC special fund' is the budget line of this fund designated specifically for MIHC services.

Appendix 2: Content of the MIHC Law

A brief outline of the content of the law relating to these services is necessary to contextualise this policy evaluation. The 38 articles of the law cover pre-marital health, ante-natal and perinatal health and guidelines on technical implementation, management and legal liability. The General Principles of the Law (Chapter 1) state that the state[16] will provide the necessary conditions and material support to make the health service more accessible for mothers and children, particularly in remote and poor areas. (Chapter 1, Article 2).

With regard to health care provision, the law states that medical care institutions should provide health care for pregnant women during their pregnancy, during and after delivery. Services specifically mentioned include:

- providing professional advice on producing healthy offspring, including information on the causes, treatment and prevention of serious hereditary and endemic diseases;
- providing consultation to pregnant and lying-in women on hygiene, nutrition and psychological care;
- providing medical services to pregnant women such as periodical physical examination;
- monitoring the development of the foetus; and providing medical care for and information on the development of the infant, including scientific child care and nursing, appropriate nutrition, and breastfeeding (Articles 14 and 24.)

The law also states that if a mother cannot deliver in hospital, the delivery should be conducted with sterile methods by a midwife with appropriate training and qualifications (Article 22). The focus of technical detail is on procedures for dealing with foetal abnormalities or pregnancies with a high risk of hereditary disease. However the law also states that doctors and midwives should conduct relevant performance procedures to improve delivery technology and quality of service to prevent and limit injuries during birth (Article 21).

Draft Implementation Regulations were published with the Maternal and Infant Health Care Law, which gave more detail about services to be provided. These have recently been updated and published as an official document (June 2001). Since the latter official document had not been published when the study was conducted, this section will briefly outline here the draft regulations in existence at the time of the study, and discuss the official document in our findings and conclusions. The draft regulations state that health services for mothers and infants from the start of pregnancy to the 42nd day after delivery should include:

- establishing a health care card for pregnant women and conducting regular ante-natal examinations;
- giving health education on nutrition and self-care during the pregnancy period;

[16] *Guo jia* or 'state' is used to cover all levels of both government and the Chinese Communist Party

- improving the management of high risk pregnancies;
- ensuring that every woman should have access to relevant health care services according to her needs;
- advocating hospital delivery, especially for high risk pregnancies;
- improving the hygienic standards of deliveries;
- implementing breast-feeding;
- providing follow-up visits after delivery;
- providing tetanus vaccinations for reproductive age women and particularly pregnant women in poor areas or areas with a high incidence of tetanus;
- providing technical and consultative service on contraception methods (Chapter 4, Article 21).

Sex identification of the foetus by health care institutions is banned (Article 32).

In terms of management of service provision and quality, the Law states that the Public Health Department of the People's Government at County level and above is responsible for monitoring and management (Chapter 5, Article 29), whilst the government at each level is required to develop a strategy to enhance the development of the MIHC care system, improve the quality of service and prevent common diseases threatening maternal and child health. (Chapter 5, Article 28). Medical health care institutions are responsible for establishing performance standards for MIHC care based on relevant regulations issues by the public health department in the State council (Article 31 of MIHC Law). However the Draft Implementation Regulations, (Article 5) state that says the Public Health Administration Department of the State Council is responsible for establishing norms and technical standards[17]. Organisations which provide MIHC services such as ante-natal care (as well as pre-marital checks) and delivery (including in the home) are required to meet the above regulations and technical standards and must have a relevant certificate from Department of Public Health.

With regard to financing the services, the Draft Implementation Regulations further state that provinces, autonomous regions and municipalities must place priority on MIHC services in their annual or mid/long term budgets, particularly in remote and poor areas, to ensure the accessibility of MIHC services (Chapter 1, Article 3) and that government at all levels must provide necessary facilities, resources and funding to support medical health care institutions implementing the MIHC law (Chapter 1, Article 4). The requirement to prioritise MIHC services in mid to long term budgets has been removed in the official document issued in June 2001 and is replaced with a less specific sentence as follows: "People's governments at all levels should bring MIHC undertakings into their socio-economic development strategies, and provide essential financial, technical and physical support for MIHC development, as well as provide special support to minority and poor areas. Governments at county level and

[17] The Article 7 of the new Implementation Regulations states: "The Health Administration of the State Council is responsible for managing MIHC at the national level. It's responsibilities include: 1) to formulate affixation of criterion and technical standards for the Law and its Implementation Regulations. 2) to formulate national MIHC development strategy and implementation agenda, relying on the principle of "distinguishing among levels and among types of regions" 3) to conduct the generalization of appropriate technologies of MIHC and reproductive health. And 4) to implement monitoring of MIHC related activities.

above could set up an MIHC development foundation, according to the specific local situation and based on needs.”

Appendix 3: Methodology

3.1. Selection of counties

Two counties in the Three Gorges area of Chongqing were selected as study sites. Researchers visited Chongqing and counties before the formal field work. Basic information on the social and economic development of the counties were provided by Chongqing and local governments. Criteria for selection were as follows: the two counties should be representative of the poor areas of the province, and they should be interested in cooperating on the study. Initially an additional criteria was that they should have been selected by the National Health Services Survey (NHSS) in 1993 and 1998 to allow comparison of use of MIHC services between these two points in time. However during the first visit to Chongqing, it was discovered that there were no counties selected in the national health service survey (NHSS) conducted in 1993. This was because Chongqing was part of Sichuan Province before 1997 and the NHSS did not include any counties which are now within the territory of Chongqing. The study counties were included in the NHSS in 1998. The implication of this discovery was that comparisons between usage of MIHC services over time could only be made using routine health service information, rather than comparing NHSS data as originally planned.

3.2. Qualitative data

A qualitative approach was used to understand the perceptions and experiences of supervisors, providers and users or potential users of services with regard to the implementation and impact of the law. In the context of relatively limited knowledge about this area it was important to provide opportunities for the views of these stakeholders to influence the scope of the study and the range of issues covered. A qualitative approach also potentially gives insight into stakeholders' perceptions of why observed outcomes occur. A case study approach was used to produce a detailed analysis of the interplay of factors influencing the implementation and impact of the law in particular contexts.

The research team consisted of two researchers from Liverpool School of Tropical Medicine (one male and one female) two researchers from the School of Public Health, Peking University (one male and one female), three research assistants from Peking University (two males and one female) and two research assistants who were health care providers in the study province but not in the study counties (both female). Training in qualitative research methods was given to all the research assistants.

Data collection, management and analysis:

At the national and provincial level, key informant interviews were held with:

1) The MIHC director at Chongqing Health Bureau
2) The Director of Health Economic Research Institute.
3) The Director of Education, Culture, Health and Sport Committee of National People's Congress.

Efforts were made to interview government officials responsible for the design and current implementation of the law, but none were prepared to discuss the law in the climate of negotiations about Implementation Regulations between the Ministries of Health and Family Planning. The implications for the research findings are that we are unable to offer an account of the expectations underpinning the drafting of the Law, and reflections on how far implementation has met these. These difficulties emphasise that the development of legislation in this area is an ongoing and highly politicised process.

Three townships in each county were selected to represent different levels of economic development and distance from the centre within each county. One village was selected in each township.

A combination of focus group discussions and individual in-depth interviews were carried out in order to triangulate responses in a private setting with those given in a more public setting. Focus group discussions were held with respondents of the same sex and similar age at the village level. In-depth interviews were the only data collection method used with providers and officials because of the hierarchy between different types of providers interviewed and because of the sensitivity of the topic in terms of asking officials to comment on government policy, both of which were likely to inhibit discussion.

Key informant interviews were held with

1) The deputy director of county government (responsible for public health)
2) The Director or Deputy Director of the County Health Bureau responsible for the MIHC programme in each county
3) The Director of the county MICH centre in each county
4) The person responsible for the MIHC group in township health centres
5) The village level provider(s) of MIHC services (midwife or doctor)

Topic guides focused on: the respondent's main tasks and responsibilities in MIHC; respondent's understanding of his/her responsibilities under the MIHC law; resources available for carrying out these tasks and responsibilities and their sources; management and reporting arrangements; the respondent's evaluation of the impact of the MIHC law, especially in relation to the poorest and their suggestions for improvement of the law and/or its implementation.

Individual interviews were carried out in each selected village with at least one woman who had given birth in the last 2 years and one woman who gave birth before the law was passed in 1994. The aim of this selection process was to compare the experiences of the cohort which used or did not use services before the implementation of the law and after its implementation. A total of 17 women were interviewed about their pregnancy and delivery experiences. Childbirth is a relatively rare event in a village in the context of the Family Planning Policy, which limits the number of potential interviewees. The small sample size was not intended to allow generalisable comparisons to be made between the two groups, but rather to enable the identification of issues relating to MIHC service use and compare the types of issues arising before and after the law was passed. The women who delivered before the law ranged in age from 31 to 38, whilst those who delivered after the law ranged in age from 23 to 34.

The majority of those who delivered before the law had only a primary school education, whilst the majority of those who delivered after the law had been to middle school. The majority of both groups were farmers, and a minority had been migrants to urban areas. The majority of those who delivered before the law did not come from influential families in the village, whilst the majority of those delivering after the law did. Thus the women interviewed who gave birth after the law were in general slightly better educated than those who gave birth before the law and possibly of higher socio-economic status due to their membership of influential families.

Focus group discussions were held separately with mothers, fathers and grandmothers in each village. Fathers and grandmothers were selected as respondents as well as mothers because of the important role they play in giving advice and making decisions about the use of health care services in pregnancy, delivery and the peri-natal period. In addition, grandmothers are more likely to have observed changes in health service provision and quality over time.

Six focus group discussions were carried out with mothers in six different villages from different townships, three in each county. In each group there were between six and eight participants. The majority of mothers interviewed were in their twenties. Most came from households which earned the majority of their income through farming and labouring, but in two villages (both in Yunyang) the majority of respondents gained most of their income through labour migration. They had between one and three children – around half of the women had one child and only a small minority had three children. Most of their children were born after 1996. Around half of the respondents had attended Junior Middle School, and just under half had attended primary school. Those with no education or Senior Middle School education were in the minority. The respondents had lived in their villages for between 2 and 35 years. At least half of them had lived in their village for more than 10 years.

Six focus group discussions were also carried out with grandmothers. There were between 6 and 8 participants in each group. The ages of the grandmothers ranged between 40 and 74. Just under half were in their fifties. The vast majority came from households which earned the majority of their income through farming and labouring. They had between one and seven children, but around half of them had three children or fewer. Around half had been to primary school, only a handful had been to middle school and the rest had no education. The respondents had lived in their village for between 24 and 72 years. Around half had lived in their villages for more than 30 years.

Six focus group discussions were carried out with fathers. There were between six and eight participants in each group. The ages of the fathers ranged from 25 to 46. Around two thirds were over 30. The vast majority came from households which earned their living either through farming or labouring. Around half were farmers and just under half were labourers. They had between 1 and 3 children, but the majority had one and only a small minority had three. The majority of these children were born after the law (between 1997 and 2001). The educational level of the respondents varied from Primary to Senior Middle School. Around half had attended Primary School and the majority of the other half had attended Junior Middle School.

Topic guides focused on: knowledge and practice of measures to protect the health of mother and child from through pregnancy, delivery and the post-natal period; factors affecting these practices; use and perceptions of available MIHC services; perceptions of change over time in service provision; and suggestions for the improvement of services.

Interviewees and focus group discussion participants were recruited with the support of village heads, health workers and the village committee member responsible for women's affairs. Instructions to those recruiting emphasised the importance of excluding village cadres or persons of high influence in community politics in the groups.

Key informant interviews with local officials and MIHC managers were carried out by the research team members from Peking University, with the assistance of the Peking University research assistants. Individual in-depth interviews and focus group discussions with respondents at the village level were carried out by the local research assistants, with the support of the Peking University researchers, due to the need to use the local dialect.

With the permission of each participant, interviews were taped, transcribed and translated by project staff. In the pilot data collection, full transcripts were translated from Chinese to English and reviewed by the principal investigators in order to assure quality and to improve the research tools and techniques used. During the main data collection the volume of data was too large to enable the full translation of all transcripts. A framework for data summary and analysis was therefore developed by the principal investigators using the research questions, and categories used in the research tools and emerging from the pilot study data. This framework was used by the Chinese researchers as a guide to summarise the important content of the transcripts. Transcripts were then revisited for clarification and further details of statements made. Analysis was carried out by one researcher from Liverpool School of Tropical Medicine and one researcher from Peking University. The other principal investigators then read and commented on the analysis. Trustworthiness of data was assured by a triangulation process which compared secondary quantitative data and information elicited through qualitative techniques, and by consultation, cross-checking of results and analysis with local policy makers and the local research assistants.

Ethical considerations:
Training and planning for data collection stressed issues of confidentiality and privacy for participants and within the research team. An important criteria for identifying places for focus groups and individual interviews was that privacy for the participants was ensured. Informed consent was sought for each participant following an explanation by a member of the research team of the research aims and process. Neither names of participants nor characteristics through which they might be identified were mentioned in the data analysis or reporting. This was made clear to all potential participants during recruitment. Tapes and transcripts were kept in a secure place with access limited to the research team. The importance of a non-judgemental attitude was emphasised in training and exercises in framing non-judgemental questions were conducted.

3.3.Secondary and institutional data collection and analysis

Secondary data was collected at the national level in terms of evaluation reports of the implementation of the MIHC law by the Ministry of Health and studies of MIHC related health seeking behaviour and quality of service provision in poor rural contexts.

Secondary and institutional data was collected in the study counties in order to understand resources, performance and outcomes of MIHC services before and after the MIHC law was passed.

The following table summarises the information collected for every two years between 1992 and 2000:

Variable	**Detail**
1 MIHC service workforce at county and township levels	
1.1 Number of MIHC professionals	• Total number of staff in township health centre • Total number of health professionals in township health centre • Total number of full time MIHC professionals • Total number of part time MIHC professionals
1.2 Structure and qualifications of MIHC professionals	• Number of staff at high, middle and low level • Numbers of university graduates, technical school graduates, health school graduates, amd high school graduates
1.3 Training	Number of months of training given (accumulated)
2 Financing of MIHC services	
2.1 Revenue and expenditure	• Total revenue • Government budget for workforce salary for county MHC station and township health centre (at county level, proportion of total health workforce salaries allocated to MIHC salaries) • Government budget for county MHC station and township MIHC staff • Government special funds for county MIHC station and township health centre (at county level, proportion of total health special funds allocated to MIHC) • Government special funds for county MCH station or township MIHC service • Operational (service) revenue in county MCH station and township health centre (at county level, proportion of total operational revenue of whole

	county's health service allocated to MCH station) • Operational (service) revenue at county MCH station and township from MIHC service • Total expenditure at county MCH station and township health centre • Expenditure on MIHC services in township health centre
2.2. Detail of special funds for MIHC services	
2.3. Detail of financial subsides from higher level or from international projects at county and township levels	• From central government • From provincial government • From prefecture government • From other provinces • World Bank project • UNICEF • WHO • Others
3. Equipment	Number and type of new equipment acquired for MIHC service since 1992.
4. Capacity of MIHC services	New resources for MIHC services since 1992 (including human resources, equipment, etc.)
5. MIHC Performance	• Prenatal examination rate (%) • Scientific delivery assistance rate (%) • Hospital delivery rate (%) • Rate of hospital delivery for high risk pregnancies (%) • Postnatal visit rate (%) • Children (under 6) systematic protection rate (%) • Immunization coverage (%) • Pre-marital examination rate (%)
6. MIHC related health outcomes	• Rates at county level and numbers at township level of: • Infant deaths • Maternal deaths • Under 5 deaths • Low birth weight • Tetanus in newborns • Pneumonia in children under 6 • Diarrhoea in children under 6 • Rickets in children • Anaemia in children

Data collection and analysis process:
Data was collected at the county and township levels. MIHC offices in county health bureaux were responsible for providing county level data and MIHC professionals and head of township health centres were responsible for providing township level data.

A pilot study was conducted in same area before the formal investigation and data collection forms were improved according to the pilot findings. The forms were faxed to the county level prior to the field investigation, with instructions and the completed forms were collected and checked by the research team during the field study. The county health bureau informants checked the data provided by the township level informants.

Logical checking was conducted in the field and at the analytical stage. Unusual data were checked by the research team and returned to the county for correction and/or explanation.

3.4.Limitations of the study methodology

A number of aspects of study methodology and focus should be considered in drawing conclusions based on these findings.

With regard to the qualitative data, several aspects of data collection and analysis could potentially limit the 'internal validity' of the data (that is, the degree to which the reported data accurately represents the lived experiences of those interviewed). Firstly, the Chinese cultural, and political context can limit the willingness and ability of participants to express their opinions, particularly where these may involve criticism of higher levels of management, the government or formal services. The necessarily short duration of data collection on a research project of this size may exacerbate this problem. However researchers were able to take steps to limit the impact of this factor by spending significant time in social interaction with some respondents, especially local officials and implementers, to build rapport and to enable the informal expression of opinions which could then be followed up in more formal interviews. This was more difficult to achieve with villagers, because of the relatively short duration of visits to each village necessitated by practical limitations. In view of these circumstances, however, it was felt that respondents were surprisingly frank and in many cases critical of government service provision.

With regard to the institutional data, this information may be considered in two parts: one focuses on the resources available to MIHC services and the other on service performance. In the part of the data set concerned with resources (workforce, financing, equipments) the quality of data is reasonable. However the reliability of the performance information (care coverage, rate of hospital delivery etc.) is likely to have been influenced by a number of factors. For example, local officials are likely to be influenced to report higher rates of service coverage and lower rates of household delivery, by the threat of punishment for bad performance by their superiors[18]. The low level of knowledge of local MIHC statisticians and misreporting on the 'floating

[18] This phenomenon is further discussed in the results section.

population' are also likely to have negatively influenced the validity of the performance data.

There are a number of problems in interpreting the quantitative data available for evaluating the impact of the law. Firstly, current performance related institutional data are likely may be unreliable because of the clear disincentives to administrators to report failures to meet targets. The falsity of some reported data was admitted by key informants in both study counties. Secondly, there have been changes in the quality of data collected during the period, due to regulations intended to promote more accurate reporting of statistics. Thirdly, there has been a change of focus in the law since baseline data was collected. The central concern with improving the 'quality of the population' arose due the high burden of disability and ethically problematic local policies such as the law in Shaanxi province whereby anyone with an IQ lower than 40 was not allowed to get married[19]. International outcry at the first draft of what was translated as China's 'eugenics law'[20]– in Chinese literally 'better births, better care' - led to a change in the name of the law and some changes in focus towards improving health care in pregnancy and the peri-natal period. Studies carried out prior to the law paid closer attention to genetic problems and inclined towards collecting worst case scenarios to justify passing the law. Fourthly, only Ministry of Health statistics on service provision are available for use in evaluating the implementation of the law, although the Family Planning department also provides some MIHC services.

The quantitative data has been collected and analysed within a case study approach and is therefore not generalisable to China or poor areas of China. However, where the study findings concur with other evaluations such as those carried out by the Ministry of Health, it is more likely that these conclusions are valid in similar contexts within China.

[19] (Hesketh and Wei, 1997)
[20] (BMJ, 1994)

Appendix 4: Abstracts of published papers and full text of draft paper

Abstract 1.

'Changes of awareness towards maternal and children's care among women in poverty areas.' *Chinese Health Policy,* Vol. 5, May 2002.

Tuohong Zhang[1], Hui Yang[1], Rachel Tolhurst[2], Shenglan Tang[2], Jun Gao[3.]

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Objective: To illustrate improvement of knowledge and awareness towards maternal and children's care among women who delivered babies during the period before and after the Law had been enacted. **Material and Method:** 6 townships in two poor counties of Chongqing were selected. 145 women and their husband and mothers were interviewed individually or in groups. **Results:** Majority of the women did not pay any special attention during their pregnancy, many people tend to consult doctor for B-ultragraphy taking and fetus position checking, as the precondition of decision making for delivering site, instead of seeking prenatal care. Majority suggested to deliver in hospital. Few people sought for postnatal care. Influencing factors include economic hardship and health care awareness. **Conclusion:** There were no remarkable changes of health care awareness after the Law enacted while awareness of postnatal care improved. Possible policy suggestions are: to increase financial input to MIHC especially for poor areas, to strengthen health education and to implement peripheral health care based on local reality.

Abstract 2

"Management, inspection of Maternal and Children's Health Care and its utilization in poverty areas". *Chinese Health Policy,* Vol. 6, June 2002.

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Objective: To understand perception of MIHC services among health care managers and providers, and to illustrate the relationship between provision and utilization. **Material and Method:** 6 townships in two poor counties of Chongqing were selected. 30 health managers and providers, and 17 women who delivered before and after the Law passed were interviewed individually, 48 women were interviewed in groups. **Results:** Both health care managers and providers are well informed about their responsibility towards MIHC and worked based on an all-agreed target oriented system. Financial support for MIHC from government was in shortage. Main resources of both fund and instrument came from outside, e.g. health programs. Manpower was in sufficiency and unqualified due to lack of financial support. Some alternatives cater on minor change could not resolve problems resulted from governmental support. There were no changes in terms of financial budget, manpower

and instrument. **Conclusion:** Possible policy suggestions are: to ensure financial support and to improve the qualification of MIHC manpower in grass root levels.

Abstract 3

"Influencing factors of Maternal and Children's Health Care Utilization in Poverty Areas". *Chinese Health Policy*, Vol. 7, July 2002.

Tuohong Zhang[1], Hui Yang[1], Rachel Tolhurst[2] , Shenglan Tang[2], Jun Gao[3]

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Objective: To understand utilization of MIHC services among farmers during 6 years after the Law had been enacted, and to illustrate the influencing factors of the utilization. **Material and Method:** a combined methodology of qualitative and quantitative was adopted. National Health Service Research in 1998 provided data related to the utilization of MIHC services and Interviews either individually or in focus group provided deep understanding why some MIHC services had been used or not. 6 townships in two poor counties of Chongqing were selected. 145 MIHC service consumers were interviewed. **Results:** No significant changes of MIHC services utilization in terms of percentage of prenatal care and delivery care had been observed 6 years after the Law had been enacted but the utilization of postnatal care increased. Main barriers of MIHC services utilization among consumers are poor economic status and health care awareness. **Conclusion:** Financial support for implementing MIHC services should be strengthened and health promotion should be carried out in communities.

Abstract 4

"A Study on Resources of Maternal and Children's Health Care in Poverty Areas". *Chinese Primary Health Care* Vol. 6, 2002.

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Objective: To illustrate changes of MIHC resource in township level before and after the Law implementation. Policy recommendations provided for further supports to MIHC services in poverty areas. **Materials and methods**: Six represented townships in two poor rural county of Chongqing were selected. Institutional data survey was conducted based on design of Second National Health Survey as well as supplementary data enquires. Staffs of township health centers (THCs) were asked to provide data related to MIHC services. Researchers controlled quality of information during field works to ensure reality. **Results**: Although number of health professionals in THC increased in recent years, MIHC workforce still kept same after the Law implemented. Each THC occupied one full-time or part-time MIHC staff neglecting

geographic and demographic factors. In average, MIHC staff could receive one month training per year, but wide variance observed among THCs. More opportunity of MIHC training was available under special health projects. Three months training per MIHC staff per year by 2000. Government budget, service fee and external assistants were the three major financial resources of poor areas. The highest proportion of THC revenue was fee from MIHC care, e.g. delivery services. Government subsides were limited because unsatisfied local economic development. External financial assistances could be viewed as a temporary resource, and contributed to improve quality of basic MIHC faculties and to support training program. **Conclusions**: Quality and quantity of MIHC staffs were wished to improve. Current reimbursement scheme for THC seems to go against further improvement of MIHC services, and reformation is recommended. Available and equity issues will be significance if external assistances remained in county level. Researchers provided suggestions on MIHC workforce development, financial scheme reform and continuously support on appropriate facilities for MIHC service in poor areas.

Key words: MIHC services, resources, poverty area

Abstract 5

"Indicators of Maternal and Children's Health Care in Poverty Areas --How Much We Can Believe?" *Chinese Primary Health Care* Vol. 7, 2002.

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Objective: To describe and analyze quality issue of MIHC information, to discuss major determinants which affecting quality of data, and to provide recommendations for improvement of health evaluation and managerial incentive mechanism. **Materials and Methods:** Two poor rural county of Chongqing were selected. Institutional data survey was conducted based on design of Second National Health Survey as well as supplementary data enquires. Key person interviews were conducted in provincial, county and township level. **Results:** The description of institutional data showed that MIHC indicators have less linkage with implementation of the Law. But overall development of MIHC service was satisfied and reached to higher level. But, qualitative analysis showed another story. For the less qualified data provided by MIHC statistics, significant over estimated of MIHC care outcome was demonstrated by institutional data. There are some determinants discussed in this report, i.e. knowledge and experiences of information processors and service providers, sensitivity of indicators, extortionate working targets, as well as unappropriate incentive method. **Conclusions:** Performance indicators may be use solely for evaluation on MIHC services, especially for that of poor areas. Quantitative and qualitative integrated approach would be that of recommended. 'Rewards and punishment', linking with result of operating assessment, should be used in case of that most of staff can reach the challengeable target. Professional supervision for basic MIHC staffs should be strengthened.

Key words: MIHC services, indicators, qualitative, quantitative, quality of data

Abstract 6

"Community Health Care and Family Planning: their Managements and Roles in Maternal and Children's Health Care". *Chinese Primary Health Care* Vol. 8, 2002.

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Objective: A comparative analysis provided general description of resources, service provision in health institutions and family planning institutions at township level. A picture of contradiction and coordination between the two sectors was analyzed. The paper provided evidences and recommendations for evaluation of MIHC and its management. **Materials and methods:** Deputy governors in charge of health and/or family planning at townships were selected in 6 townships of 2 poor counties of Chongqing. Structured in-depth discussions were conducted. **Results:** Township government officials spent more time on management of family planning, which was recognized as priority of government activity. Workforce and facility were more qualified in health sector than family planning. It has been found that there was significant different matter and volume of government financing. Health institutions provided most of services for mothers and children. But, both of two sectors provided basic medical and drug services, in different quality and different price. The contradiction of the two focused on market of basic medical services. The Act and related inter-government policy have been issued for coordinative objective, and clear responsibilities were identified. There are weak coordination and regulation for their competing in market of basic medical care. **Conclusions:** MIHC services provided by family planning institutions should be regulated by health authority, based on the Act. It should be emphasized that basic medical service provided by family planning sector should be regulated under the Act of Medical Service Institutions. Health authority has responsibility to approve and review medical services provided by family planning. Under the appropriate situation, it is necessary to try out integration of the two service sectors in local level.

Key words: health, family planning, maternal and child health, management

DRAFT PAPER FOR SUBMISSION TO

INTERNATIONAL JOURNAL OF HEALTH SERVICES

IS HEALTH LEGISLATION IN CHINA BEING IMPLEMENTED EFFECTIVELY AND IS IT BENEFITING THE RURAL POOR?: AN EVALUATION OF THE MIHC LAW IN TWO POOR COUNTIES

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Background

Health legislation in the context of health sector regulation

Health sector regulation has become a major policy issue in low and middle income countries, largely due to increasing concern with growing global trends of private sector activity within the health sector, and the separation of financing and provision of services (Hafez, 1999; Kumaranayake, 1998). Increasing private sector activity, defined as the involvement of non-government bodies in the financing and/or provision of health care, leads to demand for regulation with regard to several aspects: the variable quality of services provided in the private sector; the misuse of public resources within the private sector (such as public supplies and time of professional staff); medical malpractice and negligence; increasing inequalities in service provision; cost escalation due to 'quality competition'; and the failure of the market to value public goods such as preventive health care services (Kumaranayake, 1998). Health care regulation can be defined as "any social action exerting an influence, directly or indirectly, on the behaviour and functioning of health personnel and/or organisations" (Hafez, 1997 page 1).

Regulatory mechanisms to exert such control can include: legal restrictions or controls which require conformity to legalised requirements; incentives for behaviour change (monetary or non-monetary); fixing private sector fees or charges; licensing, certification or accreditation of medical practitioners or facilities; and monitoring by professional organisations (Kumaranayake, 1998, Hafez, 1997). This paper is concerned with legislative approaches to regulating the health sector and ensuring equitable provision of health care services.

Leenen (1998) defines health law as "a body of rules, whether statutory or otherwise, that regulates the promotion and protection of health, health services, the equitable distribution of available resources and legal position of all parties concerned, such as patients, heath care providers, health care institutions and financing and monitoring bodies" (page 77). The introduction of health legislation was seen as early as the mid nineteenth century in some European countries (Williams, 1994; Nelson, 1994) and has been increasing in low and middle income countries in recent decades. Roemer (1998) argues that health legislation is a "powerful resource" for shaping the way in which health policy is translated into health programmes and services.

There has been relatively little empirical examination of the implementation and impact of legislation as a tool for health sector regulation in low and middle income countries. Available literature suggests that governments use health legislation in a range of ways including: prohibiting conduct injurious to health across all sectors; monitoring the quality of care and consumer/client protection against medical malpractice in the public and private health sectors; managing pharmaceuticals; authorising and enforcing programmes and services to protect or promote public health (such as environmental protection, food safety, and immunisation); monitoring ethical issues in health care; regulating the production of resources for health care and providing for social financing of health care, such as the development of national health insurance schemes (Roemer, 1998; Tang, 1997; Bhat, 1997; Solon, 1997; Gesami, 1997, Osei, 1997). Hafez (1997) argues that the influence and extent of involvement by governments depends on the traditions of those governments, their legislative histories, political environments, cultural and religious values, and

economic and technological resources, which tend to either enhance or detract from the authority accorded to public regulatory bodies.

Health legislation in China

This paper outlines and discusses the findings of a policy evaluation study of health legislation in China. The impetus for regulation in the Chinese context does not arise from an increasing private sector under the definition given above, but from increasing 'marketisation' within the 'public' health sector (Bloom, 1997; Bloom and Wilkes, 1997). In the transition to a market economy in China, legislation has been significantly developed in order to offset the weakening in the central planning mechanism and political control which have historically influenced the behaviour of institutions and individuals in the Ministry of Health. The aim has been to establish a legal regulatory framework to ensure that the interests of the public in general can be protected. The degree to which there have been specific efforts to protect the poor and 'vulnerable groups' in Chinese society is debateable and is an issue addressed by this study. The study focuses on health legislation aiming to protect the interests of the public in preventive health care, an area where externalities often lead to market failure in health service provision, and specifically in preventive care for maternal and infant health, where concerns have been raised about market failure to provide services due to the low value placed on women's health in many cultural settings.

National Health Service Surveys over the last decade have shown that inequalities in health and health care are widening in China, as in many countries world-wide. For example the infant mortality rate (IMR) in the poorest rural areas was four times higher than the average level of IMR in the urban areas and two times higher than the

average level in the rural areas. In the poorest areas around 50% of women did not receive ante-natal and postnatal care, 90% of women delivered their babies at home, and only one third of these deliveries were assisted by trained midwives. There is a positive correlation between MMR and non-use of delivery services: 45% of maternal deaths occur at home or en route to hospital due to non-use or late use of delivery services (MoH Information on MIHC services). Many anecdotal reports suggest that the implementation of some important health laws in the poor areas of China has been in jeopardy, due largely to a lack of human and financial resources, and institutional capacity (Tang, 1999). However no specific research has been carried out to investigate the implementation and impact of health legislation which aims to improve access to basic services. This study aimed to contribute towards filling this gap in knowledge.

The MIHC law

Background to the law

The Maternal and Infant Health Care Law of the People's Republic of China was passed in 1994 and came into force in June 1995. The stated aim of the act is to 'ensure maternal and child health and improve the quality of the population.' The central concern with improving the 'quality of the population' arose due the high burden of disability and resulting ethically problematic local policies such as the law in Shaanxi province whereby anyone with an IQ lower than 40 was not allowed to get married (Hesketh and Wei, 1997) . International outcry at the first draft of what was translated as China's 'eugenics law' (Tomlinson, 1994) – in Chinese literally 'better births, better care' - led to a change in the name of the law and some changes in focus towards improving health care in pregnancy and the peri-natal period. There has been

continued debate about the ethics of the eugenic aspects of the law (Lancet editorial, 1995). This research project has focused on those aspects of the law relating to the provision of health care services for maternal and child health.

A brief outline of the content of the law relating to these services is necessary to contextualise this policy evaluation. The 38 articles of the law cover pre-marital health, ante-natal and peri-natal health and guidelines on technical implementation, management and legal liability. The General Principles of the Law (Chapter 1) require that the state[21] will provide the necessary conditions and material support to make the health service more accessible for mothers and children, particularly in remote and poor areas. (Chapter 1, Article 2).

Content of the law regarding service provision

With regard to health care provision, the law states that medical care institutions should provide health care for pregnant women during their pregnancy, during and after delivery. Services specifically mentioned include:

- providing professional advice on producing healthy offspring, including information on the causes, treatment and prevention of serious hereditary and endemic diseases;
- providing consultation to pregnant and lying-in women on hygiene, nutrition and psychological care;
- providing medical services to pregnant women such as periodical physical examination;

[21] *Guo jia* or 'state' is used to cover all levels of both government and the Chinese Communist Party

- monitoring the development of the foetus; and providing medical care for, and information on, the development of the infant, including scientific child care and nursing, appropriate nutrition, and breastfeeding (Articles 14 and 24).

The law also states that if a mother cannot deliver in hospital, the delivery should be conducted with hygienic methods by a midwife with appropriate training and qualifications (Article 22). The focus of technical detail is on procedures for dealing with foetal abnormalities or pregnancies with a high risk of hereditary disease. However the law also states that doctors and midwives should conduct relevant performance procedures to improve delivery technology and quality of service to prevent and limit injuries during birth (Article 21).

Draft Implementation Regulations were published with the Maternal and Infant Health Care Law, which gave more detail about services to be provided. These have recently been updated and published as an official document (June 2001). Since the latter official document had not been published when the study was conducted, this section will briefly outline here the draft regulations in existence at the time of the study, and discuss the official document in our findings and conclusions. The draft regulations state that health services for mothers and infants from the start of pregnancy to the 42nd day after delivery should include:

- establishing a health care card for pregnant women and conducting regular ante-natal examinations;
- giving health education on nutrition and self-care during the pregnancy period;
- improving the management of high risk pregnancies;

- ensuring that every woman should have access to relevant health care services according to her needs;
- advocating hospital delivery, especially for high risk pregnancies;
- improving the hygienic standards of deliveries;
- implementing breast-feeding;
- providing follow-up visits after delivery;
- providing tetanus vaccinations for reproductive age women and particularly pregnant women in poor areas or areas with a high incidence of tetanus;
- providing technical and consultative service on contraception methods

Sex identification of the foetus by health care institutions is banned (Article 32).

Content of the law regarding management of service provision and quality

In terms of management of service provision and quality, the Law states that the Public Health Department of the People's Government at County level and above is responsible for monitoring and management (Chapter 5, Article 29) whilst the government at each level is required to develop a strategy to enhance the development of the MIH care system, improve the quality of service and prevent common diseases threatening maternal and child health. (Chapter 5, Article 28). Medical health care institutions are responsible for establishing performance standards for MIH care based on relevant regulations issues by the public health department in the State council (Article 31 of MIHC Law). Organisations which provide MIHC services such as out ante-natal care and delivery (including in the home) are required to meet the above regulations and technical standards and must have a relevant certificate from Department of Public Health.

Content of the law regarding financing of services

With regard to financing the services, the Draft Implementation Regulations further state that provinces, autonomous regions and municipalities must place priority on MIHC services in their annual or mid/long term budgets, particularly in remote and poor areas, to ensure the accessibility of MIHC services (Chapter 1, Article 3) and that government at all levels must provide necessary facilities, resources and funding to support medical health care institutions implementing the MIHC law (Chapter 1, Article 4). The requirement to prioritise MIHC services in mid to long term budgets has been removed in the official document issued in June 2001 and is replaced with a less specific sentence as follows: "People's governments at all levels should bring MIHC undertakings into their socio-economic development strategies, and provide essential financial, technical and physical support for MIHC development, as well as provide special support to minority and poor areas. Governments at county level and above could set up an MIHC development foundation, according to the specific local situation and based on needs."

Study aims, research questions and methods

The study aimed to evaluate the implementation of the Maternal and Infant Health Care Law to examine the impact of the laws on improvement of health care and health status indicators in two poor, rural counties in Chongqing Province, China. The study asked the following questions:

1. To what extent do people in the poorest rural areas have access to the essential health services guaranteed by the law?

2. What impact has the law had on inequities in access to and financing of the essential health services associated with maternal and infant health care?
3. What are the major social, economic, and institutional factors influencing the effective implementation of the health legislation and access to health care services, particularly at the county and township levels?
4. What are the lessons for policy-makers aiming to improve access to basic health care services?

The two study counties, Yunyang and Zhongxian, are both located in the Three-Gorges Dam Area of Chongqing Municipality, which was part of Sichuan Province until the new Municipality was created in 1995. Over 90% of the population of the two counties are living in countryside. Both are regarded as poor counties in Chongqing Municipality, although Zhongxian is richer than Yunyang in terms of GDP per capita and annual average net income per rural resident. Zhongxian county, which has a population of 978,030 (1997), comprises of 42 townships (served by 61 township health centres) and 780 villages (served by 737 village clinics) and has an agricultural base with little industry. Larger and relatively rich townships with good transport links have a central, relatively high quality township hospital and an additional smaller facility. Yunyang has a population of 1,250,000 of which around 92% work in agriculture. The county has 65 townships (served by 62 Township Health Centres) and 827 villages (served by 860 village clinics).

Qualitative data collection

At the county level, key informant interviews were held with the deputy director of county government (responsible for public health); the Director or Deputy Director of

the County Health Bureau (responsible for the MIHC programme in each county) and the Director of the county MCH centre in each county. Three townships in each county were selected to represent different levels of economic development and distance from the centre within each county. One village was selected in each township. Key informant interviews were held with the person responsible for the MIHC group in the township health centre of each selected township and the village level provider(s) of MIHC services (midwife or doctor) in each selected village. Topic guides focused on: the respondent's main tasks and responsibilities in MIHC; respondent's understanding of his/her responsibilities under the MIHC law; resources available for carrying out these tasks and responsibilities and their sources; management and reporting arrangements; and the respondent's evaluation of the impact of the MIHC law, especially in relation to the poorest and suggestions for improvement of the law and/or its implementation. Key informant interviews with local officials and MIHC managers were carried out by the research team members from Peking University, with research assistants from Peking University, who were given appropriate training. Individual in-depth interviews and focus group discussions with respondents at the village level were carried out by two local, female, research assistants who were health care providers in the study province but not in the study counties. They were supported by the Peking University researchers due to the need to use the local dialect. The local research assistants were given training in qualitative research methods by the research team.

Insert Fig 1.

In addition, in each selected village individual interviews were carried out with at least one woman who had given birth in the last 2 years and one woman who gave birth before the law was passed in 1994. Focus group discussions were held separately with mothers, fathers and grandmothers in each village. Topic guides focused on: knowledge and practice of measures to protect the health of mother and child through pregnancy, delivery and the post-natal period; factors affecting these practices; use and perceptions of available MIHC services; perceptions of change over time in service provision; and suggestions for the improvement of services.

Interviewees and focus group discussion participants were recruited with the support of village heads, health workers and the village committee member responsible for women's affairs. Instructions to those recruiting emphasised the importance of excluding village cadres or persons of high influence in community politics in the groups. With the permission of each participant, interviews were taped, transcribed and translated by project staff. In the pilot data collection, full transcripts were translated from Chinese to English and reviewed by the principal investigators in order to assure quality and to improve the research tools and techniques used. During the main data collection the volume of data was too large to enable the full translation of all transcripts. A framework for data summary and analysis was therefore developed by the principal investigators using the research questions, and categories used in the research tools and emerging from the pilot study data. This framework was used by the Chinese researchers as a guide to summarise the important content of the transcripts. Transcripts were then revisited for clarification and further details of statements made. Trustworthiness of data was assured by a triangulation process which compared secondary quantitative data and information elicited through

qualitative techniques, and by consultation, cross-checking of results and analysis with local policy makers.

Secondary and institutional data collection

At the county and township levels, MIHC providers supplied institutional data using instruments from the National Health Services Survey. An additional data form was designed by researchers for collecting more detailed annual institutional data on MIHC services from 1992 to 2000. Staff in charge of health statistics or MIHC and County MCH managers supervised the provision of institutional data. Information was collected at both county and township levels on the following: the number, structure and qualifications of the MIHC service workforce; training provided to MIHC service providers; revenue and expenditure of MIHC facilities; equipment acquired for MIHC services; service capacity; service performance; and maternal and child health outcomes.

Findings: To what extent do people in the poorest rural areas have access to the essential health services guaranteed by the law?

Perceptions of the impact of the Law

Key informants in the selected counties felt that the law has had some positive impact on services. Greater priority has been given to MIHC services by local government, health administrators and service providers since the law was passed. Some of the positive improvements in services, such as investment in equipment and provider training are attributable to various external projects in the study counties. These included components of health sector support by the World Bank and DFID under the so-called ‘Health 6’ and ‘Health 8’ projects and stand alone projects funded by the

province including the 'Project to Reduce Maternal Mortality and Neo-natal Tetanus'. The projects were established and implemented explicitly to support the implementation of the Law.

The majority of villagers perceive improvements in MIHC service provision, although in many cases villagers cannot state time frames for reported changes were given. Amongst those changes observed by villagers are: increased utilisation of services; increased equipment – particularly B ultrasound scanners; quality improvements; increased information and education; and, in Zhongxian county, the loss of licenses for village doctors to deliver babies. The main changes mentioned which are likely to be attributable to the law are increased equipment[22]; and the loss of licenses for village doctors to deliver babies. Some villagers observe that several positive changes such as those in attitudes and skills have been accompanied by increases in price, with one specifically commenting that "The better attitude is for more patients and more money." Changes are attributed both to improving economic conditions (especially increases in ante-natal care use) and to government emphasis on MIHC. However, few villagers have heard of the MIHC law and most of those who have heard of it are unsure of its contents. One woman in Gaoshi Village summed up the attitude towards the legal developments by remarking "Usually we farmers don't care about it so that we can not remember it."

Access to MIHC services in the poor counties

Insert Table 1.

[22] However, according to the institutional data, all new B ultrasound scanners in township health centres were self-funded (though township health centre surplus). B Ultrasound scanners are used for a number of diagnostic purposes in addition to foetal development monitoring.

As the table above illustrates, the majority of villagers receive some ante-natal care, and ante-natal care services were perceived as important by respondents. However, the average number of visits is well below the standard of five set by the MoH, at 2.5 in both counties[23]. Only a minority of women deliver in hospital. There is a significant difference in post-natal care coverage between the study counties because in Zhongxian post-natal care is a service expected by women who deliver in hospital whilst in Yunyang villagers are expected to invited doctors to visit them and will only do so if they feel there is a problem, largely because they expect to pay for this service: "We'll not invite them if it is not necessary, because it will cost money" (Mothers' focus group discussion, Fengming Township). Many villagers were not aware of the possibility of receiving post-natal care visits, such as a woman who had recently given birth who said, "I didn't know the doctor should come. I wanted to see the doctor but it wasn't convenient for me to leave home" (individual interview, Fengming township, Yunyang county). There was been little apparent change in post-natal care services received within individual villages.

The Township Health Centre is the main provider of all MIHC services for the majority. The main reason given for delivering at home was that there was no need for hospitalised delivery, because the birth was expected to be normal. However the lower cost, and the flexibility of payment methods to village doctors or midwives were frequently mentioned in most villages. The distance and poor transport to the facility was given as a reason in some, remote villages, and a minority of respondents cited the poor conditions and/or the poor attitudes of doctors at facilities. The majority of villagers said that care is generally sought only where women are

[23] In the above survey, 10.7-35.5% of women received five or more ante-natal checks.

symptomatic, but that when the need is perceived the cost does not prevent care seeking. However, for the poorest minority, cost concerns do prevent care seeking, even when a need is recognised. A father in Yanfeng village summarised this as follows: “When women feel bad it is necessary to see a doctor, even though we have to borrow money. However, few women go to see the doctor unless they feel pain. Some people feel bad but can’t afford to see the doctor, so they stay at home.” In Yanlong Village, Xiannong Township, grandmothers emphasised that the affordability of care varied within the village: “It doesn’t matter for the families with good economic status. But it does matter for the poor families.”

Initiatives to improve access to services by the poor do exist. For example in Zhongxian county there was special subsidy available for poor families which was supported by the Project to Reduce Maternal Mortality and Neo-natal Tetanus. Local government has set criteria to identify poor and very poor households according to their income per person per year: those classified as very poor receive free services whilst those classified as poor receive a discount (of 100 yuan for delivery). Disabled women receive free services. 200 pregnant women have been given a subsidy to deliver in the THC since this scheme was initiated. However, some informants were concerned about the sustainability of the benefits of this initiative for the poor:

> “We charge only 200 yuan for hospitalised delivery but some people can not afford this, even when the health project gives them a discount. The problem is what shall we do with the poor people after the health project finishes?” (Zhongxian)

In the other study county informants felt that the MIHC law had not improved access to services for the poorest. There is no data on utilisation of MIHC services by the poorest at any level.

In summary, there have been some positive changes in attention to MIHC services by leaders, allocation of resources, and quality of services as perceived by users. However low demand for the services, which is influenced by financial and physical barriers, lack of perceived need and perceptions about the poor quality of the services continues to limit utilisation.

Factors affecting the implementation of the Law at the County, township and village levels

A number of economic, political and institutional factors served as barriers to the effective implementation of the law.

Firstly, the lack of financial support from government at all levels limits the ability and willingness of service providers to provide MIHC services. This has been a finding of MoH evaluation studies in other provinces such as Gansu and Anhui (People's Congress, 2000). Government budgets cover approximately 30% of provider salaries (for 'formal' full time employees) at the Township Health centres and the remaining income for service provision is gained from service fees. Health projects are often the only source of funds for training and equipment. The Township Health centres receive recurrent budgets from County governments (either via the Township government or the County Public Health Bureau) but these budgets are

insufficient to fund visits to villages for post-natal care provision, supervision, or training.

Few village level providers receive any financial incentives from the township level. An exception is a scheme run in some areas of Zhongxian county where village teams have been created for bringing pregnant women to hospital and 15 yuan is given as an incentive for each woman who is brought to hospital for delivery.

The lack of full time staff limits service coverage, especially with regard to outreach services. Some townships do not employ anyone to manage MIHC services and all MIHC managers carry out this responsibility on a part-time basis. In addition providers spend the majority of their time on providing curative services because they need to generate income to cover their salaries. This can prevent staff from visiting villages to provider post-natal care or education.

The Law asserts that the state will provide the necessary conditions and material support to make the health service more accessible for mothers and children, *particularly in remote and poor areas* (Chapter 1, Article 2, italics added). This should act as a point of leverage for providers, and some informants felt that the MIHC law had enabled them to raise more funds for service provision than previously. However the Law makes no provision for specific mechanisms for financing services. Local regulations in existence require local government to give a special subsidy for the provision of health care, but this is not always implemented and MIHC providers have to compete for resources with other political priorities. The overall county government health budget in both of the two counties increased

between 1994-97. However, the share of government health budgets allocated to family planning rose over this period but those for MIHC did not increase significantly, even after the implementation of the Infant and Maternal Care Law in June 1995. This may be partly because county governments see MCH centres institutions that can generate revenues through user charges, as well as the greater governmental focus on Family Planning at all levels[24].

Financial and managerial power over health service provision has been decentralised to the township government level. Local (township and county) governments invest in MIHC services to differing levels[25]. Poverty relief funds allocated to provinces are often spent on economic development rather than subsidising health and some subsidies from the Municipal Government and International Aid are concentrated in the urban areas[26]. Local regulations in existence require local government to give a special subsidy for the provision of health care, although this is not always implemented. Funding MIHC services is also often given low priority in comparison to areas such as Family Planning. Despite an increase in resources allocated to township health centres by township governments since 1994, there has been no increase in the resources allocated to MIHC services, as the following figures illustrate:

Insert Figs 2 –3

[24] The lack of local government commitment to funding MIHC services has also been identified as an issue in other provinces (*Implementation of Maternal and Infant Health Care Law.* Ministry of Health Report, 2000.)

[25] For example in one study county Township health Centres receive a subsidy for providing MIHC services from the county government whilst none is provided in the other. Similarly Township governments in one county funded a scheme to give village providers incentives to encourage women to deliver in hospital whilst no such scheme existed in the other county.

[26] For example 60% of funds from a Japanese project to Chongqing Municipality were allocated to Central Paediatrics hospitals and only 40% the counties.

The lack of local government commitment to funding MIHC services has also been identified as an issue in other provinces. However, some schemes such as one funded by the Township government in Zhongxian (described above) suggest that local government can take the initiative.

Secondly, the low level of skills and qualifications of staff limit the quality of services provided. Some informants felt that the lack of ability of staff to deal with complications contributes significantly to the high maternal mortality rate. One informant gave some examples:

> "For example, in March 1999, a pregnant woman delivered in Nanxi THC. The woman had massive bleeding after the child's birth, but the doctor failed to report to her director. She directly transferred the woman to the county hospital, and she died during the transfer. After her death, the director found it was just a simple case that the THC could have dealt with and the death definitely could have been avoided. There was another case in Sanba THC, where the doctor tried to induce the baby at the wrong time so that the uterus ruptured the woman died. These kind of cases occur almost every year."

Only 10-30% of Township health centre staff are medical school graduates. Most of the staff in health centres became 'doctors' in 1970s or 1980s, replacing a retiring parent. More training of staff has been conducted in recent years, due to support from

World Bank and government funded MIHC projects[27]. However significant differences in the length of training remains between the townships. The National Implementation Regulations of the Law outline a certification system by the Public Health Administration Department of the State Council which requires MIHC providers to conform to technical standards set by this institution. However, the shortage of sufficiently trained personnel undermines the practical application of this regulation. The lack of female providers also prevents some villagers from using services. Only about two fifths of the villages in Yunyang have female providers with any MIHC training.

Thirdly, the regulatory power of the law is insufficient. The content of MIHC Law does not apply to the Family Planning department, which has begun to provide MIHC services since the MIHC Law was passed. MIHC services provided by the Family Planning Department are therefore unregulated. These services are not included in MIHC statistics for monitoring and evaluating implementation of the law. The competition for the MIHC market creates tension and conflict between the Health and Family Planning departments, particularly at the local level. The Family Planning Department are often better resourced but lack qualified staff or recruit staff from the health department. The lack of both qualified staff and regulation is suggests that MIHC services provided by the Family Planning department are likely to be of lower quality than those provided in the health sector.

The law is relatively weak in terms of detailed regulations, supervision arrangements and disciplinary power. Regulations to accompany the law have been passed by the Chongqing Municipal Government, but these give insufficient detail about the

[27] The average number of months of training rising from half a month to in 1992 to four months in 2000.

provision and management of MIHC services. The Public Health Bureau is responsible for carrying out target oriented management of the MCH centre and Township Health Centres each year. However this process is often weak due to the lack of human and financial resources for supervision and poor transport conditions, as well as poor management capacity in some areas. Salary bonuses and deductions are linked to performance through a points system. In one county awards are given to THCs which perform well. However there is a great variety in the frequency and level reporting arrangements actually carried out and few providers report failures to meet targets, whatever the actual situation. Targets set are often unrealistic in the poor areas, encouraging misreporting in the context of punishments for low performance. For example, one informant admitted:

> "According to our target oriented management, we achieved more than 80% [coverage for ante-natal care]. However, the data is not real. The majority of rural women don't come for ante-natal care because they don't think it is necessary. I think the real figures should be about 40%."

The management and supervision of providers at the village level is even more difficult. Weak supervision and discipline is also related to the lack of resource provision by supervising agencies. Village doctors are generally given no financial support by the township level who therefore find it difficult to control their behaviour. As one respondent from a township health centre put it:

> "The village doctors do not belong to the health care system so that THC has no power to reward or punish them. The village doctors are out of our control"

Exceptions are two schemes in Zhongxian. In one township village providers who perform particularly well are given an award of around 1-200 yuan which is raised through charging village doctors an administrative fee. In another, as part of a project aiming to increase delivery rates in facilities, village doctors are also fined 50 yuan for assisting a delivery. These kind of measures allow for greater regulation of village providers. However, discouraging village doctors from assisting with deliveries poses ethical problems in this context in that it may decrease access to any form of delivery assistance for poor families who are unable or unwilling to pay for hospitalised deliveries, but do not qualify for subsidies or find them insufficient. In addition the cost of using health centres may place financial burdens on the poor, and prohibiting qualified village level staff from carrying out deliveries may act as a disincentive to the provision of post-natal care services, which they are best placed to offer. No clear evidence of these potential negative effects emerged during this research but they warrant attention as regulation of providers develops.

Finally, there is a low demand for MIHC services, particularly amongst the poor, due to low educational levels, lack of purchasing power, and opportunity costs. The poor economic situation of villagers combined with the charges for services limits their ability to purchase services to the level set by the law. Amongst providers, estimates of those who cannot afford delivery services range from one third, to half of the population. Most villagers agree that in each village there are some people who

cannot afford services. According to the household survey in 1996/7, 17% of those who delivered at home in Yunyang and 16% in Zhongxian, did so for economic reasons. Amongst those who can afford services many need to borrow or to sell crops for cash. Estimations of costs of services vary widely within and groups from different villagers. This variety in estimated costs suggests that it is difficult for villagers to assess the affordability of different services. The law does not address the affordability of services and variability of prices, which are major issues influencing demand for the services.

In conclusion, the lack of financial support from government at all levels limits the ability and willingness of service providers to provide MIHC services. Institutional factors such as the low human resource capacity also limit the quality of services provided and the capability of designated supervisors to perform this role adequately. The lack of regulatory power of the law, in combination with the low levels of government finance and the institutional weaknesses of the regulators severely limit the influence of the law on provider behaviour. Finally, the low demand from and weak accountability to actual and potential service users restricts the effectiveness of the law in improving access to services.

Implications for policy makers in China

Greater financial support is clearly necessary to implement the law. One informant suggested that budget investment from the government should be redirected from curative to preventive services and another that MIHC services be returned to the control of the health sector and managed separately through earmarked funds. An alternative suggested was to include MIHC related targets in the target–oriented

management for the township government management assessment by county government to encourage investment and involvement of other government departments.

More full time, qualified staff for MIHC services are needed to effectively implement the law. As one informant from a Public Health Bureau put it: “We need a special team for preventive medicine, including MIHC service in the mountain areas”. A number of changes to institutional and managerial arrangements are also necessary. The conflict between the Family Planning and MIHC departments and the unregulated nature of Family Planning provision of MIHC services must be resolved. Informants suggest that the FP and MIHC departments should be integrated, especially at the Township level, as has been achieved in some places.

Several informants felt that special, external supervision arrangements for the law should be put in place, as is the case for the supervision of other health legislation. Further clear and detailed central and local level regulations to accompany the law are needed, which stipulate the roles and responsibilities of different institutions such as Health and FP as well as local government. The regulations also need to specify measures to discipline those who break the law. However this can only be achieved in a context of sufficient resource allocation for MIHC services, subsidies for the poor, and incentives for unqualified providers to support new regulations.

Greater awareness and responses from government and broader society is necessary to implement the law. The restriction of the law’s jurisdiction to the health sector places limits on its effective implementation and the success of implementation depends

largely on the attitude of local leaders. Sustainable and equitable development is clearly a necessary foundation for efforts to encourage both government, providers and villagers to prioritise preventive care services. As one informant put it:

> "The whole society should attach more importance to it, and only depending on the health sector is not enough."

Ultimately, political commitment to the provision of MIHC services to the poorest people in China is necessary both at central and at local government levels, which requires advocacy for greater resource allocation at both levels.

Discussion and broader lessons for health care legislation

With regard to authorising health programmes and services, Roemer (1998) identifies establishing the financing to support programmes as the most important element of legislation. One of the aims of the MIHC law in China appears to have been to oblige provincial and municipal governments to allocate more resources to the provision of MIHC services, but this obligation has been difficult to enforce, particularly in the context of competing political priorities at this level such as Family Planning. This situation has worsened with the publication of official national implementation regulations in June 2001, in which an obligation by provinces, autonomous regions and municipalities to place priority on MIHC services in their annual or mid/long term budgets present in an earlier draft (Chapter 1, Article 3) has been replaced by a weaker obligation to "bring MIHC undertakings into their socio-economic development strategies, and provide essential financial, technical and physical support

for MIHC development as well as provide special support to minority and poor areas… according to the specific local situation and based on needs".

Kumaranayake (1998) identifies a number of threats to successful health care regulation which were found in this case study:

- Political influence and self-interest on the part of interest groups which are intended to be subject to regulation.
- A lack of monitoring and enforcement capacity on the part of the state.
- 'Regulatory capture': close relationships between the regulator and regulatee can jeopardise the implementation of regulation.
- Information asymmetries: regulators are to a large extend dependent on the regulatee to provide information, so the regulatee can delay giving information or give inaccurate information.
- Low capacity of institutional structures in society, including civil society, to ensure transparency and accountability and low awareness amongst consumers about what constitutes good medical practice.

In relation to the MIHC Law, it is clear that the interests and political priorities of different stakeholders influences the implementation and monitoring of the law. For example, the lack of remit of the law in relation to FP is a political issue which relates to the power of FP providers as an interest group, and the political priority placed on FP detracts from the allocation of resources to MIHC services. In addition, health care providers selectively implement the law, focusing on services which generate revenue for individual providers and institutions, such as assisted or institutional delivery.

The supervisory and monitoring capacity of the regulator (the Public Health Bureau) is clearly weak, partly due to financial and human resource constraints. The monitoring capacity of the Public Health Bureau is further limited by the often close relationship with service providers, which influences outcomes of supervision in an institutional context heavily dominated by relationships and patronage (*guangxi*). Informants at the service provision level and above also admitted that information given to the regulator is often unreliable, in the context of unrealistic targets set at higher levels and linked to punishments for low performance.

Finally, there is low demand amongst consumers, partly due to their economic situations and a weak culture of accountability of providers to consumers, which is accentuated in the poor, rural areas.

With regard to European health law, Legemaate (2002) stresses the importance of "specific guidelines for developed by organisations of health professionals or other advisory bodies" for the implementation of health law which enable stakeholders "to bridge the gap between legal theory and everyday practice'"(page 108). In China, it would appear that the legislators have aimed to provide a sufficiently broad framework to be adapted to China's enormously varied local circumstances. The development of local regulations, implementation, supervision and monitoring of the law is therefore subject to an intensely political process of competition with other national and local government priorities for scarce resources at the local level. In the absence of significant financial commitments to the provision of MIHC services, the regulatory power of government at all levels over service providers is practically limited.

In conclusion, health legislation is an important tool for safeguarding access to indispensable health care for all and protecting the interests of poor populations (Leenen, 1998). However, the implementation of health legislation is inevitably a political process which involves reconciling the interests of different groups of stakeholders at different levels in a system. Mechanisms for resource allocation and measures for influencing provider behaviour (such as incentives and disincentives) are central to effective implementation and may be closely linked with one another. This case study illustrates the political difficulties involved in efforts to influence provider behaviour through a national level legislative framework in a situation of high effective decentralisation of control over those providers, due to extreme regional variation in economic situations and limited resource inputs from the centre. It is only through successful advocacy for sufficient and equitable resource allocation at all levels of government that access to quality MIHC services by China's poorest people will be improved.

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Fig 1. Organogram of administration, financing and provision of MIHC services

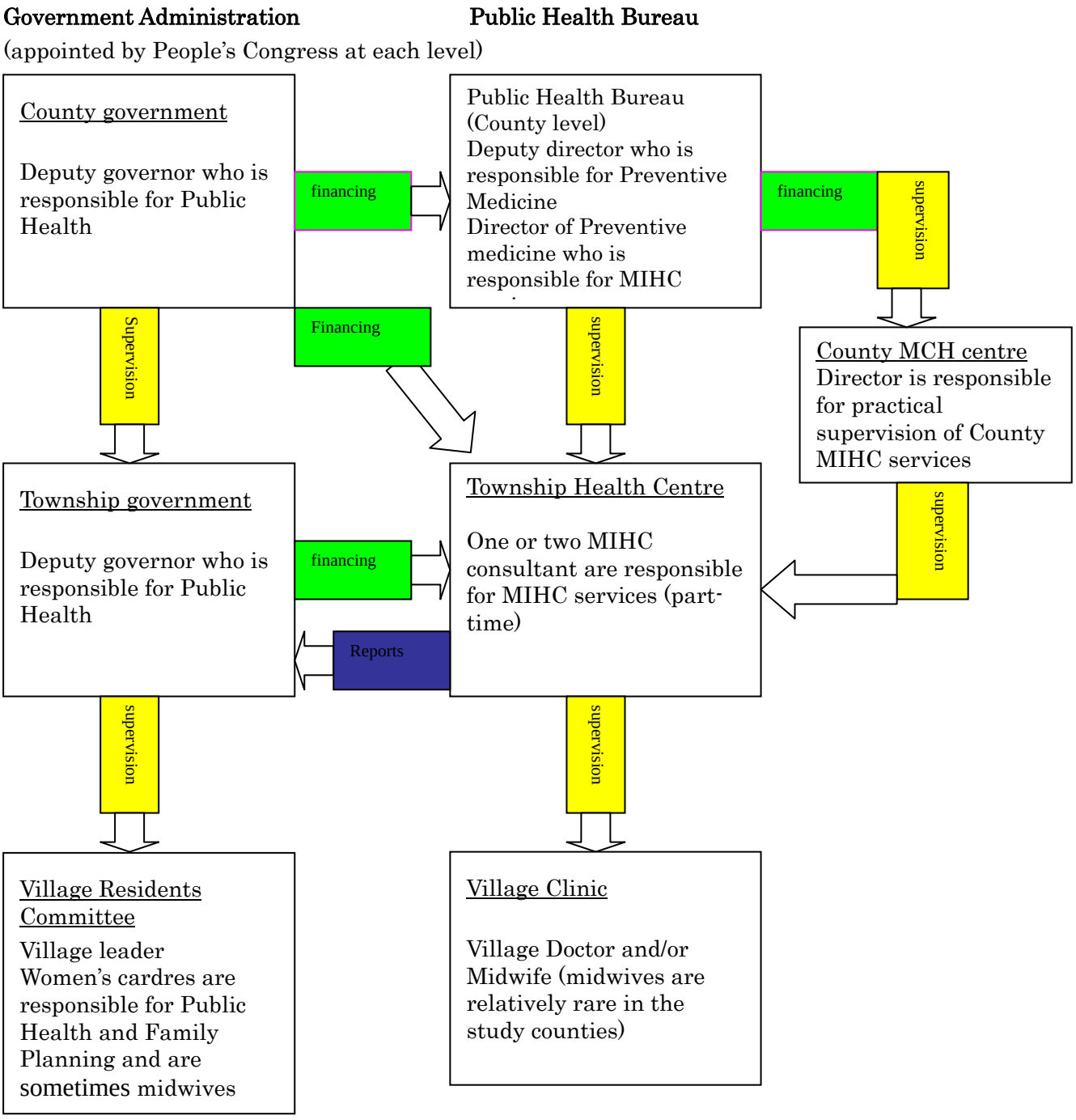


Fig 2: Township government budgets for township health centres (total of allocations in study townships)

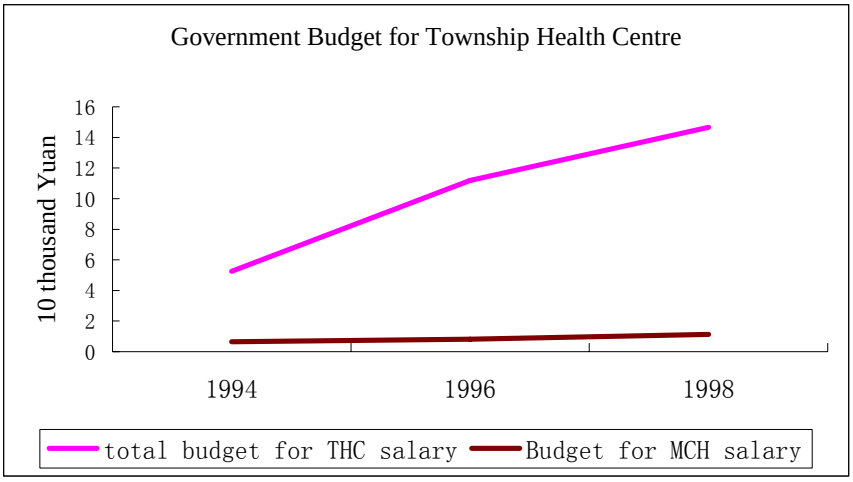
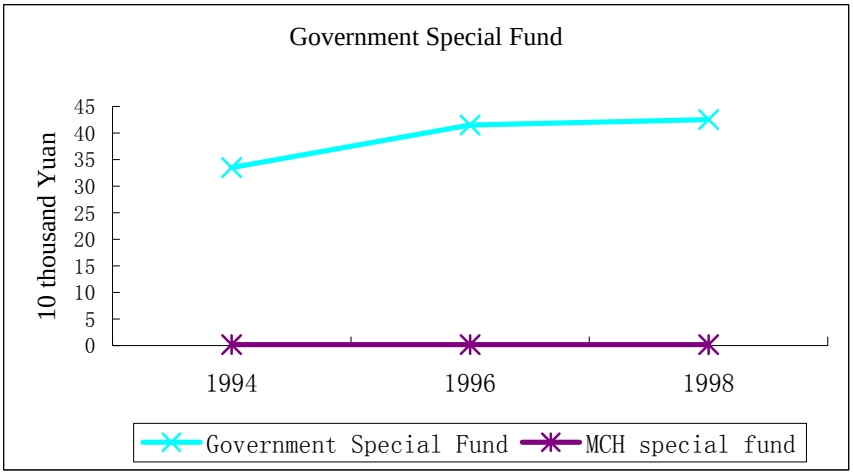


Fig 3: Township government 'special fund'[28] allocations (total of allocations in study townships)



[28] 'Special funds' are one item of the township government budget for township health centres which can be allocated for nominated purposes such as buying a b-ultrasound scanner for a health centre. The 'MIHC special fund' is the budget line of this fund designated specifically for MIHC services.

Table 1. Selected indicators of service use in the selected counties according to the 1998 National Health Services Household Survey

Service use variables	Yunyang	Zhongxian
% receiving at least one ante-natal check-up	57%	66%
% hospital delivery	30%	26%
% of home delivery assisted by village doctor/ midwife	27%	71%
% of home delivery assisted by a doctor from a local facility	17%	13%
% of women who delivered at home because they did not think it necessary to deliver in hospital	46%	52%
% receiving at least one post-natal care visit	12%	38%