ABSTRACT

This thesis explores the structure, organization, and effectiveness of the Chinese rural healthcare system, the New Rural Cooperative Medical System (NRCMS). My aim is to elucidate how this state-sponsored insurance system delivers healthcare to a vast and diverse population based on the sample of a single county, Mojiang County in Yunnan Province, and whether its many goals have been achieved since its founding in 2002. In four months of fieldwork, I interviewed doctors and patients in village clinics, town hospitals, and a county hospital, as well as an urban specialty hospital in Kunming. This study highlights the progress that has been made to date and the areas where improvement still needs to occur. My paper concludes with concrete suggestions for addressing some of the challenges that remain for the NRCMS in Mojiang County.

Rural Health Care in
Yunnan Province, Pu'er Prefecture, Mojiang Hani Autonomous County

by

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Introduction

Approximately half of the Chinese population lives in rural areas. Despite this, rural citizens use only 20% of the country's medical fund, while urban dwellers use 80%.[1] There are many complex reasons for this, reasons that include geography, the economy, the way the system is set up, and social factors. In addition, the prevalence of minority ethnic groups in rural areas, with their different customs and often different spoken dialect, presents unique challenges in delivering healthcare. This paper examines the effectiveness of the current rural healthcare system in Yunnan Province in western China. My findings are based on the available secondary sources and my own four months of fieldwork in Mojiang County.

Rural China covers millions of square miles inhabited by many ethnic groups that differ in customs, religion, and dialect from the Han, the most common ethnic group in China. In order to limit the scope of my research, and examine the operation of the health care in depth, I have focused on a single region, Pu'er Prefecture, Mojiang Hani Autonomous County (Mojiang County). It is important to bear in mind that what I discovered in the field might not apply in a different rural area in China with different traditions and conditions. Further, the county where I did my fieldwork is inhabited primarily by Hani, a minority ethnic group concentrated in that area with some of its own cultural practices—a fact that limits making broad generalizations from my findings.

In my fieldwork, I interviewed local residents and observed the operation of medical facilities in order to get a sense of how healthcare needs were served by a system of local clinics, town hospitals, and county hospitals. In my two visits—one for three

[1] Xixi Wang et al., "The Research of NGO's Role in Resolving Chinese Unbalanced Medical and Health Resources Allocation in the New Medical Reform Time," *Chinese Primary Health Care* Vol.29, No.9 (2015): 4.

months over the summer and an additional month in the winter—I was able to visit 5 clinics, 2 town hospitals, and 1 county hospital in Pu'er Prefecture, Mojiang County. I interviewed approximately 30 people, including healthcare providers and patients and their families. I also spent time in a couple of urban specialty hospitals that serve some of the more complex needs of the rural residents.

Although my findings only scratch the surface, this fieldwork is a beginning in assessing the local effectiveness of the New Rural Cooperative Medical System (NRCMS), established after Mao's time in 2002, with the goal of contributing some insight as to how resources might be better allocated in rural areas.

Before the NRCMS

In the 1940s, China's rural health care was not as advanced as the health care offered in urban China. The shortage of medical services and medicines in the countryside was very severe.[2] This caused acute or chronic illnesses to remain untreated, which adversely affected the health of a very important—and large—segment of China's population: the farmers and other agricultural workers. The first Rural Cooperative Medical System (RCMS) was established by the Central Communist Party during the 1940s in the Shaan-Gan-Ning border region specifically to address that problem.[3]

Beginning in the 1950s, the Rural Cooperative Medical System was primarily financed by the farming welfare fund of the communes, along with individual premiums

[2] 于长永、刘康和何剑 (2011)：改革前后三十年农村合作医疗的制度变迁,《西北人口》，4（32），58-62。
[3] 许玲（2015）：农村医疗保障的历史、现在与未来—以 H 镇为例，《黑龙江史志》，（1），252。

paid by rural citizens, and some government subsidies.[4] It organized and systematized what the "barefoot doctors," citizens who were trained in basic hygiene and traditional Chinese medicine, were already doing. In addition, the county governments subsidized township health centers, which consisted of some outpatient clinics that hired medical professionals to deliver primary healthcare and treat most common illnesses.[5] Patients with more serious illnesses were treated at the larger county hospitals. Those hospitals were primarily funded by the central government, but also depended on contributions from local town and county governments.

By the late 1970s, the improved healthcare resulting from the RCMS had contributed to significantly increased life expectancy and simultaneously decreased the prevalence of certain diseases, such as cholera, dysentery, hepatitis, and typhoid.[6] It covered almost 90% of the villages and 85% of rural citizens.[7] China's relative success with this program inspired many third-world countries to use the RCMS as a model to solve their own health care problems.[8]

According to most observers, the RCMS improved public health conditions in China, although there were huge inequities between the rural and urban health systems. However, as a consequence of market economic reforms in the 1980s, with a shift from a collective system to a rural, family-based economy, the communes—which had provided most of the funding for the RCMS—vanished. Without this funding, the RCMS slowly disappeared. The impoverished farmers in rural areas were not willing to contribute to the

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[4] 张自宽、朱子会、王书城和张朝阳（1994）：关于我国农村合作医疗保健制度的回顾性研究，《中国农村卫生事业管理》，（6），4-9。
[5] 邓燕云（2007）：农村合作医疗制度的历史变迁，《农村经济》，（10），85-88。
[6] Ian G. Cook and Trevor J.B. Dummer, "Changing health in China: re-evaluating the epidemiological transition model," *Health Policy* 3 (2004): 329-343.
[7] 许玲（2015）：农村医疗保障的历史、现在与未来—以 H 镇为例，《黑龙江史志》，（1），252。
[8] 于长永、刘康和何剑 (2011)：改革前后三十年农村合作医疗的制度变迁,《西北人口》，4（32），60。

old medical cooperatives nor were they able to pay for their own medical care out-of-pocket when they became ill. The collapse of the RCMS left around 90% of farmers without access to affordable healthcare.[9]

From 1980 to the late 1990s, the government attempted several times to re-establish the Rural Cooperative Medical System. In 1985, only 5% of villages participated in the RCMS—a far cry from its peak at 90% in the 70s—and in 1989, it further decreased to 4.8%.[10] In some areas, the citizens went back to visiting the locals who had served as "barefoot doctors" in their communities. According to Sitong Wang, an administrator at Hohai University in Nanjing, these doctors operated like businesses, charging individual patients for visits and medicines.[11] There was no government or collective insurance support involved in this process. Even in 1997, as the government struggled to reinvigorate the RCMS, the system covered only 17% of China's rural villages.[12] This failure was mainly due to inadequate funding and lack of political interest.

In October 2002, the Central Committee of the Communist Party of China and the State Council released a document entitled "The Decision on Further Promoting the Countryside Health Work." The document was created out of concern for the low rate of coverage of rural cooperative medical care and the serious problem of farmers falling back into poverty due to illness.[13] It was the first document on countryside health issues from the Central Committee since the founding of the People's Republic of China in

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[9] Xuedan You and Yasuki Kobayashi, "The new cooperative medical scheme in China," *Health Policy* 91 (2009): 1-9.
[10] 于长永、刘康和何剑 (2011)：改革前后三十年农村合作医疗的制度变迁, 《西北人口》，4（32），58-62。
[11] Sitong Wang, "Change of the Role of Village Doctor under the New Rural Cooperative Medical System from the W Village in North Jiangsu Province," *Medicine and Society* 28(2015): 52-61.
[12] 于长永、刘康和何剑 (2011)：改革前后三十年农村合作医疗的制度变迁, 《西北人口》，4（32），60。
[13] Liuni Guan, "From Fairness and Efficiency to Analyze Government Responsibility in New Rural Cooperative Medical System," *Journal of Agriculture* 7(2014): 111-114.

1949. This document proposed the establishment of a New Rural Cooperative Medical System (NRCMS) with the goal of providing basic coverage to all farmers by 2010.[14] According to Liuni Guan, the implementation of the NRCMS demonstrated the "people-oriented and for-the-people philosophy of the Party and government." She states that the NRCMS is an essential measure for addressing issues concerning agriculture, farmers, and rural areas, improving farmers' health conditions, and building a moderately prosperous society in all respects.[15] Focusing political interest on farmers' issues created the necessary conditions to provide effective health care to rural citizens.

According to John and Zheng, the spread of the virus SARS all over China and Hong Kong in 2003 convinced the Chinese government to speed up the work of setting up the NRCMS.[16] Because of China's vast size and the enormous regional differences, the establishment of the NRCMS was initiated through the use of pilot projects. By the end of 2008, the pilot sites had already provided health coverage to approximately 500 million rural residents in all provinces—more than 50% of the entire rural population.[17]

Operation and Funding of the NRCMS

The RCMS, while it was initially established by Mao's government, was paid for and administered at the local level.[18] Medical care funds were set up at the village level,

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[14] 刘纪荣和王先明（2005）：二十世纪前期农村合作医疗制度的历史变迁，《浙江社会科学》，（2），155-159。

[15] Guan, "From Fairness and Efficiency to Analyze Government Responsibility in New Rural Cooperative Medical System," 111-114.

[16] Wong John and Yongnian Zheng, ed., *The SARS Epidemic: Challenges To China's Crisis Management* (Singapore: World Scientific Publishing, 2004), 1-10.

[17] Yanzhong Wang, "Development of the New Rural Cooperative Medical System in China," *China & World Economy* 15 (2007): 66-77.

[18] Xingzhu Liu and Huaijie Cao, "China's Cooperative Medical System: Its Historical Transformations and the Trend of Development," *Journal of Public Health Policy* 13 (1992): 501-502.

and the failure of small village populations to form participant groups of meaningful economic scale led to a low level of financing. The former system could rarely reimburse hospitalization fees. The New Rural Cooperative Medical System, however, is different in that it is partially funded, organized, guided, and administered by the central government, and has a robust bureaucratic system. Although it is voluntary and citizens are not required to join, by using counties as basic units, the NRCMS has expanded the scope of financial pooling, increased the number of participants, extended the scale of the cooperative medical fund, and reinforced the system's capacity to manage risks. [19]

The system overall has become more centralized. Rather than being managed at the village level, the NRCMS is managed at the county level and above.[20] Initially, these changes in structure were a result of the fact that the system was implemented through pilot programs stemming from the central government. The pilot programs were not, however, exactly duplicated in other regions as the program was rolled out, to account for the inherent differences from one region to another, especially concerning economic factors.

Thus the quality and quantity of available healthcare in rural China can vary widely, due to the economic realities in different regions. This variability is built into the way the NRCMS is funded. It is a three-part system in which members, the provincial government, and the central government all pay a portion of the cost. For instance, each individual paid 90 yuan per year in 2015, and that amount is going up to 120 yuan per year in 2016. The contribution from the central government will remain at 120 yuan per member per year. The provincial government contribution varies depending on the

[19] Wang, "Development of the New Rural Cooperative Medical System in China," 66-77.
[20] Wang, "Development of the New Rural Cooperative Medical System in China," 66-77.

affluence and priorities of each province, but they must match the central government's contribution at a minimum, which currently means a contribution of at least 120 yuan per person per year. Most provinces contribute considerably more. For example, Yunnan province contributed approximately 230 yuan per individual in 2015. In provinces where this occurs, the available funding for healthcare is greater— which inevitably has an effect on individuals' ability to afford their healthcare. The NRCMS contribution and reimbursement practices apply to illnesses and conditions ranging from childhood vaccinations to chemotherapy.

Although the funding is set by the provincial government, counties also have some leeway in determining exactly what is covered and how, within the basic requirements of the NRCMS. It is the county, for example, that determines the reimbursement percentage for medical care for its residents. This comes into play particularly for patients who are getting treatment at a hospital facility, either at the town or county level. Depending on the county's practices, they either pay for the entire cost themselves and get reimbursed to whatever percentage their county has determined, or the hospital figures it out based on what their county's percentage is, charges the patient only his share, and assesses the county for the rest. In addition, the central government has a cap for the amount it reimburses each patient, which helps control the government's cost, and gives patients an incentive to try to find the most affordable care.

The complexity of this system presents challenges for the urban specialty hospitals—the hospitals that would treat only the most severely ill rural patients who could not get the required care at a county hospital—which are not under the NRCMS umbrella. Further complicating the issue is that they likely have NRCMS patients coming

from several different counties, each with its own reimbursement practice. It is a tall order to expect doctors at urban specialty hospitals to be aware of the specific requirements and restrictions of each county. As a result, doctors are likely to treat and prescribe outside of the covered illnesses and medicines, for which patients could not claim any reimbursement. For covered treatment and medicines, hospitals often do not want to go through the headache of dealing with each county for payment, but instead leave it up to each patient to pay at the time of service and then claim their own reimbursement. This can leave the rural patient with an unexpectedly large medical bill from the urban specialty hospital.[21]

To manage the complex administration of the NRCMS, local governments at all levels have set up management teams, including medical service coordination teams, rural cooperative medical management commissions, and rural cooperative medical supervision commissions. These institutions are used to ensure the effective and efficient running of the NRCMS. Rural cooperative medical supervision commissions and audit departments regularly examine and check over the use and management of rural cooperative medical funds. Rural cooperative medical service administrative institutions also regularly publicize the complete revenue and expenditure status and utilization details of rural cooperative medical funds.[22] This system is more operationally effective than the old RCMS because it imposes more structure and accountability. Authors Yu et al. come to the conclusion that, as a result of coordination among these institutions,

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[21] 邹敏、尹芹、陆烨和俞群俊（2015）：对昆明市某三甲医院新型农村合作医疗重大疾病政策执行状况的分析，《辽宁医学院学报》，13（1），55。

[22] Wang, "Development of the New Rural Cooperative Medical System in China," 68-69.

service quality has improved to some extent, service efficiency has increased, and medical costs have been controlled.[23]

As Ma points out, the New Rural Cooperative Medical System has some major features that were not in the old system. Although the old Rural Cooperative Medical System also received individual and government financing, plus contributions from the rural collectives, there were no defined methods for collecting funds.[24] Under the current system, counties have local NRCMS offices, where villagers go to pay their membership fee once a year, and to find out about any changes in policy. This is also their opportunity to voice any complaints they have about the system. The village doctors do not have any power themselves to make changes, so complaining to them achieves nothing. Only the NRCMS officials can recommend and implement policy changes.

Another distinction between the NRCMS and the old RCMS is that participation in the NRCMS is voluntary where membership in the RCMS, under Mao, was imposed on everyone. After Mao, the first attempt on the part of the government to rekindle the RCMS made the system voluntary. The voluntary nature of the rekindled system was an important step, but due to lack of participation and government focus, it did not succeed. As Li says, in the new system, the principle of voluntary participation of rural residents is important, as are their rights to knowledge and participation in supervision and management. It is a medical system of mutual aid and fraternity, neither compulsory nor universal.[25] Rural representatives are part of management and supervision, which ensures

[23] 于长永、刘康和何剑 (2011)：改革前后三十年农村合作医疗的制度变迁,《西北人口》，4（32），58-62。

[24] 马聘宇（2015）：新型农村合作医疗重大疾病医疗保障制度病种组合的合理性分析，《中国卫生经济》，34（3），62-64。

[25] 李慧（2014）：《新型农村合作医疗制度的法律规制研究》，中国，甘肃政法学院硕士论文。

a level of transparency, enhanced by the fact that working bodies periodically publicize the reimbursement rules and regulations, and the operation status thereof. [26]

The NRCMS, with its emphasis on personal responsibility through opting in and partial reimbursement, gives a large majority of rural residents access to healthcare. However, there are still people who lack even the minimal resources necessary to participate in this partially funded system. For these people, China gradually introduced a medical aid system into the NRCMS between 2003 and 2005. Those who cannot afford the fees associated with the NRCMS apply to the program and, if they qualify, the central government will cover the annual fee, provide extra money for medical fees, and reimburse more outpatient fees for the patients.[27] The RCMS after Mao, by contrast, did not have a comparable way to ensure that the most vulnerable populations received adequate medical care. As Bai and Gu say, the medical aid system is the last line of defense, ensuring that everyone is included in the NRCMS. [28]

Up to now, the medical aid system has had a different management institution from the NRCMS. This is symptomatic of a general problem with communication among the various medical systems in China. Each one is run completely autonomously, without sharing any patient information or data, which, as I will describe below, leads to wasted resources and corrupt practices. In the future, the government is planning to put the medical aid system and NRCMS under the same roof, organized and managed by the

[26] Wang, "Development of the New Rural Cooperative Medical System in China," 66-77.
[27] 孙晓锦（2011）：农村医疗救助与新型农村合作医疗衔接对策研究，《中国卫生事业管理》，（6），452-453。
[28] 白晨和顾昕（2015）：中国农村医疗救助的目标定位与覆盖率研究，《公共政策》，（9），109。

same department, to decrease the management costs and to provide more benefit to the citizens.[29]

The New Rural Cooperative Medical System and Minority Populations

64% of China's area is populated by minorities, spread out over vast, mostly rural regions. Although those officially recognized minorities comprise only 8.5% of the total population, 10% of China's medical facilities are in the minority-dominated areas. This may seem like a generous allocation of resources, but the enormous distances involved still make it extremely difficult for those minorities to have access to the healthcare they need. Residents are widely scattered in small villages in mountainous areas, making it difficult for them to travel to receive healthcare if their needs are not met by the clinic in their village. This makes the village clinics vital to local public health, and yet these clinics are not capable of treating any but the most basic illnesses and health problems.[30] In addition, this 10% of medical facilities are furnished with inadequate and outdated equipment and an insufficient amount of medicine.[31] The situation is further complicated by the lack of technology and communications with the outside world.

In addition to all this, these minority-dominated regions are affected by diseases that are rare in the rest of China, including plague, cholera, rickets, Keshan disease (a type of cardiomyopathy), endemic fluorosis, and goiter (resulting from a poor water supply).[32] Many of these are not on the list of diseases covered by the NRCMS, which could be a contributing factor to the much lower life expectancy compared to eastern,

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[29] 孙晓锦（2011）：农村医疗救助与新型农村合作医疗衔接对策研究，《中国卫生事业管理》，（6），454。
[30] 申喜连和齐文霞（2015）：我国民族地区新农合的特殊性及路线选择，《探索与争鸣》，（10），101。
[31] 郭普东（2008）：民族医药发展之我见，《中国民族医药杂志》，（1），76。
[32] 申喜连和齐文霞（2015）：我国民族地区新农合的特殊性及路线选择，《探索与争鸣》，（10），100。

urban China. In 2010, the average life expectancy in Yunnan Province, situated in the foothills of the Himalayas with a large minority population, was 69.54 years—compared to 80.18 in Beijing, and 80.26 in Shanghai and both their surrounding areas.[33]

Other considerations, including their adherence to different religious beliefs and their own traditional medical practices, are also a factor.

Mojiang Hani Autonomous County

Mojiang county is a vast, verdant, mountainous landscape covering 5312 square kilometers (3300 square miles). Nestled in the rolling hills and valleys are 163 small villages inhabited by a total of 360,000 people, of which 60.8% belong to the Hani ethnic group, and the remaining are mostly Han with a few other scattered minorities. The Hani have their own spoken dialect and their own religious practices, but are otherwise well integrated with the Han and other minorities. If anything, because the Han in Mojiang county are a minority there —unlike the rest of the China—they have adapted themselves to the Hani ways, rather than the other way around. As far as the economy goes, 210,000 of the inhabitants are very poor, and 110,000 of them live in abject poverty. This makes Mojiang one of the poorest counties in China, regardless of the ethnic makeup of the population. In addition, Mojiang is located 273 kilometers (169 miles) as the crow flies from the capital of Yunnan province, Kunming, where the best specialty hospitals in the province are located. Because it is 99.98% mountainous, travel by road to Kunming is long and arduous.[34]

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[33] 2012 中国卫生统计年鉴（2013），《中国协和医科大学出版社》，北京。

[34] 赵家文和李长春（2009）：墨江县贫困山区实施新型农村合作医疗现场减免措施分析，《卫生软科学》，23（4），361。

Villages in Mojiang County are nestled among the mountains

These geographic and economic conditions make it extremely difficult for people in Mojiang County to get adequate medical care. There is a chronic lack of medicines and doctors in the county, creating a cycle of poverty: people work hard to raise their standard of living, and then one sickness can completely reverse any progress they have made toward prosperity.

I immersed myself in the unique characteristics of Mojiang County during my fieldwork in June, July, August, and December of 2015, and January of 2016. It was soon clear that what income the people in this county have comes from either agriculture or tourism. While agriculture is the principal economic driver, Mojiang County can claim some unusual attractions for tourists. Two-thirds of its land lies at a latitude below the Tropic of Cancer and one third is above it. Around the summer solstice (normally about June 22), a rare phenomenon occurs, where an object on the line of latitude of the Tropic of Cancer does not cast a shadow for an entire day.[35] Tourists come from all over just to experience this unusual phenomenon.

Mojiang is allegedly also home to thousands of pairs of twins. Local people believe that the geographic division between tropic and sub-tropic is also responsible for the high proportion of twins in the population. Their belief is that the two different climatic regions combine the *yin* and the *yang*. This is also said to be auspicious for fertility, attracting people to the twin springs in Hexi Village, where they think the waters are beneficial to conception. Further, the annual World Twin Festival, attended by twins from all over the world, is held in this county in the beginning of May. [36]

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[35] 沈霞客（2013）：墨江双胞胎之乡探秘，《科学大观园》，（19），76-77。
[36] 谢昭光（2009）：墨江双胞胎之谜，《科学 24 小时》，（9），22-23。

The primary agricultural products in Mojiang are pu'er tea, Mojiang Twin Wine, and purple rice—a crop which is unique to the region. Other than tourism and these agricultural products, there is essentially no other source of income for inhabitants of this county.

The reasons I chose Mojiang for my fieldwork were 1) it differs from eastern China in its concentration of minority ethnicities and its challenging geography, and 2) it was one of the first rural areas to adopt the policies of the NRCMS in 2002. It was, in essence, a pilot project to determine the efficacy of the NRCMS.

Most of the secondary sources that were available to me were not based on fieldwork, but rather examined the policy as a whole, focusing on the theory and principles of the NRCMS. However, one study exists by Corinna Blume[37] that goes into depth regarding the actual experiences of healthcare providers and patients in Fujian Province, China. This province is in the southeastern part of China that is predominantly Han, and does not have a high concentration of minorities. So although some of Blume's findings are similar to and support mine, the fact is that southeastern China is generally more affluent and accessible, factors that have some effect on healthcare delivery and usage. Blume's observations, therefore, cannot simply be assumed to apply to Mojiang County. However, they complement my own work, and provide a few interesting points of comparison. Further, Blume's study was undertaken in 2006 when the NRCMS was still in its infancy—ten years before my study of Mojiang County.

The mountainous geography of the region made it impossible for me to visit all the villages in Mojiang in a three-month period. There were few roads between villages,

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[37] Corinna Blume, *The New Cooperative Medical Scheme in China, A Qualitative Study to Explore Opinions About the Impact of the NCMS on Accessibility of Rural Healthcare in Fujian province/China* (Germany: VDM Verlag Dr. Müller, 2010).

and often getting from one to the other might involve an eight-hour walk. Therefore, I concentrated my fieldwork on one county hospital, two town hospitals and some smaller local clinics in a few different villages that I could reach by car or motorbike: Sangtian, Banmao, Bixi, Keman, and Xima Villages.

Getting access to villages, and being able to interview villagers and doctors, was a little complicated at the beginning. The local NRCMS office was wary of my interest in the program and assigned a sort of "minder" to accompany me on my interviews. When she was with me, I felt that the interviewees were spouting prepared texts and not being as candid with me as they might be. However, after a few days, this minder left me to myself, not imagining that I would actually spend three months in the county, and I was able to get much freer access and more genuine reactions from the people I interviewed. Soon the villagers were calling me "Teacher Zhu."

In Mojiang County, as in other rural parts of China, there are basically three levels of services available to villagers, depending on how severe their illnesses and conditions are, or what kind of care they require. As shown below, the village clinics provide the basic medical care, including prescribing some medicines (antibiotics and analgesics and other drugs administered intravenously) and vaccinations. If the local clinics cannot treat the patient, the next step should be to go to the nearest town hospital, where they have more facilities and the ability to treat and diagnose illnesses (pathology lab, ultrasound, x-ray and other diagnostic equipment). For complex reasons arising from some bizarre administrative choices, most patients skip the town hospital and go directly to a better equipped and staffed—and much busier—county hospital. For the most serious illnesses

or conditions, or when major surgery is required, patients must go to a specialty hospital in the nearest big city, which is outside the jurisdiction of the NRCMS.

Mojiang County has 168 village clinics, covering 163 villages. (A few villages have more than one clinic.) There are 15 town hospitals, plus, at the county level, a general hospital, a maternal and child care service center, and a Chinese medicine hospital.

What follows are my observations first of the village clinics, then the town hospitals, then a county hospital, and finally an urban specialty hospital located in Kunming. No names are mentioned for privacy considerations. I have listed the villagers as "villager A, B, C" etc. and the doctors and nurses as "doctor/nurse Z, Y, X" etc.

Village Clinics in Mojiang County

I was only able to visit 5 villages, but all 163 of the villages in Mojiang County have at least one clinic with at least one village doctor. The clinic buildings themselves are built and supplied by the county government. Often, the clinic is the newest and best building in the village. As a result, the clinic becomes not only a resource for medical attention, but also a gathering place for the community. Each clinic displays a sign that indicates to the population that this is the government-authorized clinic.

The only medical equipment to be found in these clinics is a blood pressure cuff, a stethoscope, a thermometer, and IV stands and bags. Clinics also have a cupboard containing the medicines on the government-approved list. In addition, some clinics have

a refrigerator for medicine storage and limited living space for staff. However, any living accommodations are very minimal.

Most of the medical staff at the clinics had previously been “barefoot doctors” under the old RCMS system. These were minimally trained community members who were given the job of providing minimal medical care, often even before there was any system in place. Therefore, most of them are familiar figures in the community where their clinic is located and often have a basic knowledge of Chinese herbal medicine. They do not have any medical degrees, but are required to go to the town hospital twice a year for training.

Clinic hours are 7am to 5pm, but beyond working hours, patients can call and doctors will come to their house, if necessary. Yet with all this, the village doctors report that they are not paid enough to live on. Their basic salary of 400 yuan a month is paid by the local government. This is less than can be earned washing dishes at a restaurant in a bigger town. It is possible for them to earn an additional 100 yuan per month, subject to their performance, which is evaluated through an annual inspection.

To augment this small income, many of the village doctors either work in the fields or have other jobs. With no retirement benefits, job security, or paid sick leave, being a village doctor is not a very attractive job for anyone outside the village, and often results in high turnover, when doctors find better employment elsewhere. This is also one reason why doctors are recruited from the former barefoot doctors, and tend—like the general population of the village—to be either young or very old. Those who are in their prime or have a family to support are likely to seek better jobs in the cities.

Some of the better clinics have two doctors, a man and a woman, but having two doctors is rare, for the reasons enumerated above.

Despite the obvious limitations and drawbacks of the village clinics, one concrete benefit is that there is often a very good doctor-patient relationship. Doctors are local and well known to the community, important figures in local life, as opposed to the impersonal environment common in the large hospitals in the big cities. The village doctors are truly members of the community, often born and raised in the village they serve.

1. Bixi Village: Doctor Z, Villagers A (mother), B, C, D AND E

For three months, I lived in the village of Bixi (Population: 3797), at first in a farmhouse recommended by my "minder." Once I was there, she left me alone so I could move freely by myself. The farmer I was staying with did not want me to pay for my accommodations in his small two-story concrete house, consisting only of two rooms, each lit by a single electric bulb. The room I stayed in had a wooden bed with no mattress. It made me uncomfortable not to pay because they did not have much income, so, after two weeks, I moved across the street to a noodle shop, where I could help them during the day in exchange for room and board.[38]

The village of Bixi has historic significance, as it was on the Ancient Tea Route, a route that was used to transport tea by caravan from China to India from 700 AD to 1960.

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[38] This noodle shop is somewhat famous with Chinese "foodies," who make a pilgrimage there just to eat the noodles. It was there that I was able to meet and talk to a few Chinese tourists instead of local villagers. When I asked them about the NRCMS, they had no idea that it existed, or that it was any different from their urban healthcare system.

My accommodations in Bixi village

Tofu on the honor system

The famous noodle shop

As a result, there are many ancient buildings, and it is also a tourist destination. That said, it is not very developed, and it is out of the way, so it does not have a big tourist trade. The village has many customs that were very different from my experience in urban China, including an honor system for purchasing soymilk and tofu made available on the street. From Bixi I was able to travel to the four other villages, each anywhere from 40 minutes to 2 hours away by foot or motorbike.

The family I first stayed with was a mix of Hani and Han (the ethnic group of most Chinese). Because the father was Hani, the family tended to follow the Hani traditions and beliefs. There was a strong religious element in their lives, with a shrine in their living room, which they prayed to regularly. The reason this is relevant is that I learned from the mother, who could speak Mandarin well, that the Hani people are more likely to try to get well through prayer rather than by going to a doctor. This makes it all the more remarkable that, in Mojiang County in 2015, with its large Hani population, 85.2% of the people belong to the NRCMS.[39] Those who do not choose to join the NRCMS are primarily people who are healthy enough to feel they do not need medical coverage, and although the membership fee is small, they would rather spend that amount on other expenses.

I talked to the mother about the village clinic and health care in Bixi. Overall, she thought that the NRCMS clinic was an improvement in making a doctor available, but she did point out one unintended consequence of the new policy. This was that a traditional, inexpensive Chinese medicine that she had found worked very well in treating a cold was not on the list of medicines that she can get at the village clinic. The medicines on that list are generally more expensive western medicines. To get the

[39] 乡镇合医办工作总结（2015.10）内部文件。

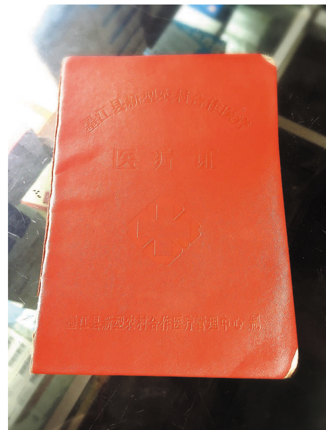
medication she prefers she must purchase it from a private pharmacy in a town that is not very close, and that they visit only once a season.

The mother took me to the village clinic, where I met Doctor Z. Since I was staying in this village, I had a lot of opportunity to speak to him and get a better understanding of him, the clinic, and its relationship to the village. This doctor was a man in his sixties who happened to have been one of the barefoot doctors in the pre-NRCMS days. He was knowledgeable in traditional Chinese medicine and techniques—such as spooning, cupping, and acupuncture. He admitted that he had very little modern medical training and was not well educated, but he felt that his role as the first person villagers would come to when they were sick was very important. They trusted him, and so were more likely to seek help if they needed it. He acknowledged that what he could do in the clinic was very limited, that he would often have to refer the patient to the town hospital, but that fact did not diminish the importance of his role.

His pride in his position is generational, and stems from a popular movie from the 1970's, *Spring Seedling*, in which a young girl goes to the country to become a barefoot doctor and help her fellow citizens. This romanticized image of barefoot doctors caused a lot of people to want to become barefoot doctors themselves.

I gained some interesting insight from Villager B, a woman whose husband raised and sold livestock as their only source of income. She had been a laundress working from home, but had developed severe arthritis and could no longer do that work. As a result of the arthritis, she requires regular injections of cortisone. Although she has to get the actual drug from the town hospital—which is about three hours away—she can bring it back to Bixi, and the village doctor can administer it daily. Without this possibility, she

Village clinic patient records



Patient's red NRCMS membership book

would have to travel to the town hospital every day, which would be almost impossible. She was very grateful for the village clinic.

Through Villager C, I saw how the reimbursement system works for each family. Each NRCMS member family receives a small red booklet that includes their photographs and ID card numbers. This booklet contains a record of all the medical care each family member receives, the cost of the treatment, the reimbursement amount, and the balance remaining until they reach their annual cap. The book is divided between outpatient and inpatient care, and the doctor enters the information and signs for each treatment or medicine. On the clinic's end, the doctor keeps another book that the patients have to sign when they receive treatment. However, some villagers do not know how to write, and so their thumbprint acts as their signature.

Villager D told me something that gave me insight as to how village doctors can earn extra income beyond their salary from the NRCMS—if they have the right skills. Because Doctor Z had been a barefoot doctor and knew how to do cupping, etc., villagers like Villager D would come to him for those treatments rather than take a time-consuming trip to a town hospital. However, these traditional treatments are not covered by the NRCMS if they choose to have them at a village clinic, and so patients either pay out of their own pocket or barter with the clinic doctor for a meal or goods. Although it is not a substantial amount of money, providing this convenience for local patients does provide a little extra income for the underpaid village doctor.

The unique place the clinic occupied in the community was demonstrated for me by Villager E, a young boy whom I saw everyday at the clinic, but who was not there to receive medical attention. He was not related to the village doctor, yet called him uncle,

Bixi village doctor

Bixi clinic as after-school care

and went to the clinic every day after school until his parents—who were out working in the tea fields—could come and pick him up. As a trustworthy member of the community whose clinic is seen as a safe place, the village doctor can have an importance that goes beyond providing minimal medical care; in this case, after-school supervision.

2. Sangtian Village Clinic: Doctor Y, Villager F

I traveled first to the clinic in Sangtian Village (population: 2332) and was greeted by a bright pink flyer. This was a flyer distributed by the Mojiang County authorities setting out the new NRCMS policy for that county. Doctor Y, a relatively young woman who had been in the position for only three years, gave one of these flyers to anyone who came to the clinic. Basically, the flyer provided information about applying for additional health benefits available from Mojiang County. This new policy covers 16 chronic and serious diseases, including cancer, kidney disease, serious hypertension, heart disease, diabetes, hepatitis, rheumatoid arthritis, lupus, anemia, osteonecrosis of the femoral head, Parkinson's, gout, hyperthyroidism, hypothyroidism, and stroke. The flyer stated that outpatient fees would be reimbursed at 70% with a 2,000 yuan cap, as opposed to the 50% reimbursement for other diseases and 300 yuan cap. The flyer also stated that applicants have to have belonged to the NRCMS for at least 3 years in order to apply for this extended coverage, and the application deadline is March 1 of any given year. However, Doctor Y said that these requirements are somewhat flexible; that the purpose was to include as many people as possible rather than to exclude them.

This sounded like good news for people who have any of these diseases. However, in order to qualify, the patient had to present very specific proof that they were indeed suffering from one of these chronic conditions. For example, in the case of cancer, the patient needed to provide the results of an X-ray, an MRI, a CT Scan, *and* a pathology report, all proving that the patient had cancer. In order to get these documents, the patient would have had to make a visit to a county, or in some cases an urban specialty hospital recently. If the patient was already being treated for the disease and had been for a long time—in the case of diabetes, say—getting the enhanced reimbursement would require an additional visit to the county hospital, and he would probably have to pay for the tests out of his own pocket, or get a very minimal amount reimbursed from the NRCMS for that visit—something few village residents could afford to do. What would make this enhanced policy even more useful would be if it covered a larger portion of the costs for the tests necessary to present prior to approval to participate in this program. As it now stands, for many rural residents, it is a medical catch-22.

Nonetheless, it is evident that the NRCMS in Mojiang County is making a genuine effort to improve the level of coverage for those who most need it, including the severely mentally ill. Their outpatient fees are reimbursed at 100%. Villager F, who was lying on a cot in the clinic having IV medication administered, was justifiably proud that his county has this higher quality of health policy, since his diabetic relative in another county has to pay more out of pocket for his care.

This good attitude notwithstanding, the clinic itself was unsanitary and dimly lit. Even when the doctor wanted to put on her white coat so that I could take a picture of her,

Exterior of the Sangtian Village Clinic

Village doctor in Sangtian

Patient receiving IV meds in Sangtian

she was so unused to wearing it that she could not find it, and when she finally did, it was filthy.

To my surprise, this facility had a computer, but Doctor Y had no idea how to use it. The computer is part of another effort to improve efficiency and communication by putting medicine supply information online so that necessary medication can more effectively reach the places where it is needed. Until the village doctors can be adequately trained to use it, though, the computer might just as well be a paperweight. Instead, doctors keep records of their supplies of medicine on paper, and the village doctor makes a phone call to obtain additional medicine.

Unlike the other villages I visited, the clinic in Sangtian was not often very busy. Doctor Y told me she sees a few patients each day, and occasionally gets phone calls, but the job is not overly taxing. This is very likely because this village is very close to one of the bigger town hospitals in Shuanglong, so patients can easily go there for treatment.

3. Banmao Village Clinic: Doctor X, Villagers G and H

Banmao village (Population: 2224) is much poorer than Sangtian, and it is farther away from the developed portion of Mojiang County. However, its clinic building was one of the most modern and attractive clinic buildings I saw. It had two stories and it faced a pleasant courtyard with benches where villagers could sit. On the sunny summer day when I visited, the benches were full of people of different ages, chatting and just enjoying the outdoors. This was a good example of how the clinic serves as a community center for villagers.

This was the only clinic I visited where there were two doctors, a man and a woman. They worked alternating weeks at the clinic, and when they were not at the clinic, they were out working in the fields. Another distinguishing characteristic of this clinic was that it had two rooms for seeing patients on the ground floor. The second floor had living accommodations, consisting of a bedroom and a kitchen. Although by urban Chinese standards the accommodations were poor and shabby, this allowed each doctor to stay on site during the weeks when they were working—something Doctor X really appreciated. Her home was a two-hour motorbike ride away.

Doctor X was enthusiastic and passionate about her role as a village doctor, and was more than willing to get better training so she could be more confident and do a better job for the people in her community. She attended the two required two-week training sessions at the town hospital, but she felt this was not enough. The training consisted only of observing and assisting the doctor, and did not provide any opportunity for her to practice new knowledge or skills. Doctor X is an unusual case: a young woman who really wants to make a contribution and continue to serve as a village doctor, but with more training. It seems like a missed opportunity for the NRCMS not to offer a way for her to increase her competence.

The first villager I spoke to, Villager G, was an old woman. I asked her whether she thought the NRCMS was a good program, and she nodded. However, I discovered that she was a member of the Hani minority, and really did not understand Mandarin. This brings up an important issue in this county, which is that all the literature and information to do with NRCMS is written, but there are a significant number of people in the county who cannot read. In addition, the officials who implement the policy on a

Entrance to Banmao clinic

Exterior of clinic showing second floor

Medicine stoarge in Banmao clinic

Doctors' living quarters

local level also speak only Mandarin. So even if they try to explain the policies, chances are that they will not be very well understood, especially by the old people.

Villager H provided an example of the benefits enjoyed by someone over sixty years old in this county. She was no longer required to pay the annual membership fee for the NRCMS. The county government pays it. Since Villager H had just turned 60, this made her very happy. Perhaps because of this, of all the people I spoke to, she was the most positive about the benefits of the NRCMS, saying that it had made a good improvement to healthcare in the village.

4. Keman Village: Doctor W, Villager I

Keman village (Population: 2415) was the most difficult to reach of all the villages I visited. It was situated on a mountain, and accessible only by dirt road. Its clinic was the least well equipped and maintained of all the clinics I saw. The ceiling in the treatment room was half falling down, the sheets on the bed were dirty, and the supply of medicines was extremely limited.

Doctor W complained that he did not earn enough money. Not surprisingly, his clinic did not pass the inspection that would have given him the additional 100 yuan a month.

At this clinic, I spoke to Villager I, a grandmother who had walked two hours with her little grandson on her back in order to get him a free vaccination. When she arrived, she discovered that the vaccine he needed was not yet available at the clinic, and she would have to walk the two hours back home and return another day. This is quite a

different situation than in the counties in Blume's study, where the roads are good and public transportation is available to help rural residents to get to clinics and hospitals.[40] Although clinics in Mojiang County have telephones—which in theory could help prevent unnecessary visits such as the grandmother's—many of the villagers do not themselves have phones. The only way they can speak to the village doctor is to go in person.

Because I was there with the brother from the family I was staying with, and we had two motorbikes, I offered to take the grandmother and her grandson back home so she would not have to walk. She politely refused the offer, and I found out from my companion (who happened to be half Hani and half Han) that this is typical of Hani people. They pride themselves on their independence and the fact that they do not rely on the government or other people for help. He said that the Hani religious views are very fatalistic and that they believe that whatever happens is a matter of destiny—which means that at least for the older people, visiting a doctor when they are sick is not a high priority. In the case of the grandmother, she was seeing to the welfare of her grandson, and the vaccine was free so she was willing to make the trip. This was another example of how, at least according to my source, the different ethnic traditions and practices affect the attitude toward healthcare, and should be taken into consideration when establishing best practices in rural parts of China.

[40] Corinna Blume, *The New Cooperative Medical Scheme in China, A Qualitative Study to Explore Opinions About the Impact of the NCMS on Accessibility of Rural Healthcare in Fujian province/China* (Germany: VDM Verlag Dr. Müller, 2010), 48.

Keman village clinic

Empty supply shelves

Keman village doctor

Dilapidated treatment room

Grandmother’s wasted trip

5. Xima Village: Doctors V and U, Villager J and K

Xima Village (Population: 2607) is also on a mountain. Unlike the previous clinic however, the clinic was newly built and was the best of all the ones I saw. Although there was only one doctor officially at the clinic, that doctor, Doctor U, was the son of Doctor V, who was his predecessor. Doctor V was retired but he spent his days at the clinic anyway. This family tradition of being the village doctor from one generation to another is very rare, because village doctor is not a very lucrative position. But Doctor U grew up helping his father and learning from him and wanted to do the same thing. He is hoping that his son will also follow in his footsteps.

The clinic itself was clean, well organized, and well equipped. This clinic also had a computer and, in this case, Doctor U, as a member of the younger generation, actually knew how to use it. Unfortunately, the system itself is not very reliable at this point. The data are often wrong and the Internet connection is poor, but it is a start.

Villager J was the only patient at the clinic that day. She was getting analgesics via an IV while sitting outside on the bench enjoying the mountain view. She was quite happy with the clinic because it was a great improvement over the old clinic, which was much smaller and less modern.

Despite being the best clinic, it was here that I witnessed a disturbing practice with regard to medical waste. There was no system for disposing of used needles, dirty bandages, medicine bottles, or other contaminated waste. Everything was simply thrown

Three generations in Xima village

IV in the open air

Clean, organized supplies

Treatment with a view

View from Xima clinic

Medical waste

into a pile behind the clinic, open to view and access by anyone, creating a hazardous and unsightly situation.

On the way down the mountain, I met with Villager K, who was on his way to the clinic. I mentioned the medical waste I had seen. He told me that this was a problem the villagers are aware of, and at first he thought I was from the government and had finally come to do something about it. He was disappointed to find out that I was not, but I assured him that I would mention the problem if I could.

Town Hospitals in Mojiang County:
Doctors T, Nurse S, Villager L

Town hospitals treat diseases and conditions that cannot be treated by the little village clinics. Residents will go to whichever medical facility is closest to where they live. Both town hospitals that I visited in Mojiang County have the same basic equipment, staffing, and access to medication.

My first stop was Shuanglong town hospital in Lianzhu. My "minder" took me on a tour of the facilities, which consisted of an ultrasound room, a room for electrocardiograms, a lab, operating theaters, offices, and about ten wards. The hospital had a staff of 16 doctors and nurses.

Doctors and nurses who work in the town hospitals are paid a decent salary—over a thousand yuan per month—by the central government, and receive benefits that include health insurance and retirement. That said, it used to be that doctors were compensated depending on how many procedures they performed, and could increase their income by

Shuanglong Town Hospital

Unused diagnostic equipment

Operating theater

Corridor outside patient rooms

doing more work. This system was changed to a flat salary a few years ago, and this change in policy—at least according to the doctors I spoke to—has had the unexpected effect of making the town hospital facilities less often used. It seems that doctors are not eager to add to their workload if it doesn't lead to increased earnings.

The hospital building was new and much better quality than most of the other buildings in the town, which indicates that resources were clearly invested in it. However, the hygiene inside the hospital was not up to the urban standards that I have observed. The lab was messy, with exposed electrical cords, open boxes, and plastic wrap on the counters. The ultrasound and electrocardiogram machines were covered with plastic, and Doctor T said they had never actually been used. This was a concrete example of the wasted resources resulting from the change in the way the doctors are paid. Because they no longer received additional money for doing extra procedures, they did not make any effort to get trained on and use the equipment. Further exacerbating this waste is the fact that the town hospitals are given a budget by the central government to purchase new equipment each year, and they cannot use this money for anything else. These two factors combined resulted in unnecessary equipment sitting idle in the hospital.

I also observed that the operating theaters had windows open to the outside and very little evidence of sterile practices. The wards contained simple wood-framed single beds with IV stands next to them. There was no monitoring equipment.

During my afternoon tour, I saw very few patients. I was able to speak to Patient L, however, who was there getting an anti-inflammatory medication intravenously. I asked him where all the other patients were, and he told me that they had all left, that the farmers who come arrive early in the morning, get their treatment, and then go back and

Disorder and chaos in the town hospital

The famous ambulance

work in the fields. He was almost done with his treatment and planned to hurry back home and work. The type of treatment Patient L was receiving was very similar to what villagers can get in the village clinics. In fact, possibly the only reason to go to the town hospital for such a thing would be that it is somehow more convenient. I learned from Villager L that the town hospitals used to have a much bigger role in rural healthcare, but now, for the reasons stated above, people who need more complex treatments will skip over the step of the town hospital and instead choose to go directly to the county hospital.

This is different from what Blume observed in Luoyuan County in Fujian Province with the town hospitals. Although at the beginning of her study in 2000, town hospital usage was very low, in later years, some town hospitals invited specialized doctors to provide additional services to their patients. Predictably, town hospital usage in those cases increased.[41]

Without a similar kind of investment in staffing, the new equipment at the Mojiang county town hospital does little to increase greater patient usage. For example, Doctor T insisted I come and look at their brand new ambulance and take a picture of it. All the town hospitals were given an ambulance by the NRCMS at the end of 2013. The ambulance is a vast improvement over previous years, when patients would have to hire a cab if they needed transport to the hospital. The ambulances are not free, however. The patients are charged two yuan per mile. Sadly, like the other equipment in the town hospital, the ambulance appeared to be underutilized.

Bixi Town Hospital (which is not near the center of the small village of Bixi) is similar to Shuanglong, but has several notable improvements. With 20 staff members and

[41] Blume, *The New Cooperative Medical Scheme in China*, 50.

Bixi Town Hospital

Medical supplies in Bixi Town Hospital

Treatment room

Operating theater

13 wards, Bixi has more departments and services available. There is a delivery room, a nursing observation room, and a first-aid station. As in Shuanglong, however, the delivery room and operating rooms are not often used. Nurse S told me that the normal practice is to give birth at home, so hospital deliveries are rare. Although home births are not covered by the NRCMS, they are attended by midwives from the local area who may be paid a small fee by the family.

Perhaps most interestingly, Bixi Town Hospital has a department devoted to Chinese herbal medicines and traditional treatments, including acupuncture and Tui-na massage. The hospital features an entire room full of compartments that contain various herbs, clearly tagged with their names. Although other hospitals in China do usually include traditional medicines and practices as part of what they offer, it was surprising to have this so abundantly available in a hospital that is otherwise so minimally operational.

However, according to Xilian Shen and Wenxia Qi, many of the more than 20 distinct minorities have their own folkloric medicinal treatments and people are, therefore, unwilling to go to village clinics for western medicine—or even traditional Chinese medicine treatments.[42]

And of course, Bixi Town Hospital also had its brand new ambulance.

[42] 申喜连和齐文霞（2015）：我国民族地区新农合的特殊性及路线选择，《探索与争鸣》，（10），101。

Maternity room

Ambulance interior

Chinese medicine dispensary

Mojiang County Hospital

In stark contrast to the town hospitals, Mojiang County Hospital was extremely busy—partly for the very reason that town hospitals do not take on their share of the treatment they are equipped to give. Mojiang County Hospital is one of three different healthcare facilities on the county level, along with a Maternal and Child Health Center and a Chinese Medicine Hospital. All three buildings are within close proximity to each other. This is the usual case for the county level health facilities. The county hospital is the highest level of care an NRCMS member can go to for outpatient treatment and still have it covered under their plan.

It was immediately apparent to me that the culture and environment of the county hospital was completely different from the village clinics and town hospitals. County hospitals are under the NRCMS umbrella, but they have more medicines in stock and more equipment and diagnostic facilities than the town hospitals, and everything is well used. Patients are processed quickly, and there is very little discussion between them and the doctors. The value and strength of village and town facilities is in the ability to create doctor-patient relationships, take the time to communicate with a patient, and generally be an integral part of the community. Because the county hospital was so busy, it really felt more like the urban specialty hospital, which I will discuss below. The matter of how the county hospitals interact with the urban specialty hospitals presents an interesting study. Some of these interactions are covered in this section, others are covered in the following section.

Not only do county hospitals have more of the medicines that are on the NRCMS list, but because they are busy, they are seen as a profit center for the drug companies. Just as in the US, drug representatives come and try to get the doctors and administration to choose their particular brand of medicine over someone else's. I myself saw several drug company representatives waiting to see the doctors. As one of my sources explained to me, some of the medicines doctors ultimately choose to purchase end up being more expensive than other medicines, and the doctors will tend to prescribe the brand they prefer regardless of whether it is more expensive than an alternative medication—which might be just as effective. The patient, in turn, has no opportunity to request less expensive medicines. This is partly because there is no true one-to-one communication between doctor and patient, where such concerns could be addressed. Patients either take the medicine the doctors prescribe, or take nothing.

Similarly, in the event they are referred to an urban specialty hospital for some inpatient treatment the county hospital cannot give them, patients have no power to choose which hospital they will be sent to. It is in the specialty hospital's financial interest to get as many patients as possible. Therefore, in order to ensure this, they sometimes negotiate with a given county hospital to send all their patients to them in exchange for a monetary contribution. This practice, which I learned of from the people I spoke to at the urban specialty hospital, could be one of the reasons the county hospital doctors are so well paid compared to their counterparts in the town hospitals.

The county hospitals can provide almost the same care as an urban specialty hospital, and because they are part of the NRCMS, the staff is familiar with all the guidelines for members, what is covered and what is not. However, there are some

instances where NRCMS patients will either be sent to, or choose to go to, an urban specialty hospital. One reason could be that there is no surgeon at the county hospital who is qualified to or capable of performing a certain type of surgery. In this case, the NRCMS patient, as an inpatient, will have a portion of the additional cost of the urban specialty hospital covered under their plan. This can still be a very expensive proposition for the patient and so, rather than sending the patient to the urban specialty hospital, a county hospital will sometimes hire the urban specialty hospital surgeon to come to their facility to perform the special surgery. In this case, my source said, they will pay the surgeon and then charge the patient more than the amount they paid the surgeon, so they end up making a profit. The urban specialty surgeon also finds this practice lucrative, a convenient way to supplement his or her income. By enabling the NRCMS patient to stay within the NRCMS system, the county hospital is also ensuring that more of the total cost for treatment will be covered under their plan. This is why, although patients are well aware that the hospital is overcharging for these guest surgeons, they are willing to accept it. Ultimately they will pay less out of pocket than if they had gone to the specialty hospital for exactly the same operation. This has the additional benefit of keeping them closer to home and limiting travel time and costs.

Another reason an NRCMS member might go to an urban specialty hospital instead of being treated at the county hospital is because the urban system includes higher quality medical materials on its covered list. For example, if a patient needs a replacement heart valve, the one that the county hospital will implant is of inferior quality compared to the one they would get at the urban specialty hospital. The same goes for

joint replacements and other types of prosthetics. People who can afford the extra cost will sometimes opt to pay more at the specialty hospital for these higher quality materials.

Urban Specialty Hospital

The urban specialty hospital is under the umbrella of two completely different medical systems than the NRCMS: the Urban Employees' Basic Medical Insurance system (UEBMI) and the Urban Residents' Basic Medical Insurance program (URBMI). These programs have a different medicine list than the NRCMS and they cover different diseases to different degrees. In theory, only urban residents and employees can be members.

The urban hospital I visited was even busier and more impersonal than the county hospital. With such a frenetic environment, it is not surprising that little attention is paid to the special reimbursement requirements of the few NRCMS patients who end up there.

Although a villager who is treated at the urban specialty hospital for whatever reason can receive medication and treatment that may be eligible for reimbursement, because the staff at the urban hospital are only familiar with the urban medicine list, they are likely to be prescribed medicines that are not covered under their plan. Even if the hospital does prescribe treatment or medication covered by the NRCMS, the reimbursement percentage is lower than for treatment they receive at any NRCMS facility. To understand why this creates a difficulty, it is important to be aware of how the specialty hospitals work, and how different they are from the rural system the villagers are used to—even though they bear outward similarities to the county hospitals. Just as

in the county hospitals, patients cannot make an appointment to see a doctor at a specialty hospital. They must go to the hospital, wait in line to purchase a numbered ticket that serves as payment for the doctor's service, and then wait until their number is called—which could be hours later. This process is the same even if a patient is referred to the urban hospital by the county hospital. Only patients who are critically ill and in need of immediate, lifesaving care can avoid this aggravating process. This system is also in place at the county hospital level, but the very busy urban hospitals have much longer wait times than the county hospitals.

It was easy to identify the NRCMS patients at the urban specialty hospital who started lining up to see a doctor from very early in the morning. They came with their portable bedding, so that they could be at least somewhat comfortable while they waited. I was curious as to why I didn't observe many of the urban patients waiting in line, especially early in the morning, and discovered that this is because many urban patients pay someone else to hold their place in line. This is just one example of what a huge gulf there is between the experience of an urban specialty hospital and a village clinic. It is easy to see how bewildering it must be to be faced with this system for someone whose entire life has been centered in a tiny village. Once at the urban hospital, the patient is funneled into an intense, crowded environment, where he is just a number waiting to be seen, and where no one is really familiar enough with the NRCMS to help him navigate the system.

Because of the demands made on the urban specialty hospital, doctors must see as many patients as possible. But there is a limit as to how many can possibly be seen on a given day. Therefore, only a predetermined number of tickets are available for patients to

purchase each day, and if the tickets are sold out when a patient gets there, then he has to come back on another day. To make matters worse, in some cities, people have figured out how to profit by this system. Sometimes an entrepreneur will get to the window where tickets can be purchased early in the morning and buy multiple tickets. Then when real patients arrive, and there are no more tickets to be had, the scalpers will try to sell them tickets at an inflated price. Some hospitals have caught on to this practice and will not allow people to buy more than one ticket at a time.

It is easy to imagine how trying such a system can be for someone who is genuinely suffering, especially if they cannot get to see a physician on the first day they arrive at the hospital. When a patient does see a doctor, the interaction with the doctor is completely the opposite of the interaction the patient would expect to have with their village doctor. Physicians in specialty hospitals, just as in the county hospital, have no time for any personal interaction because they are trying to see all the patients that have been allotted to them on that day.

As stated above, the majority of patients who come to the urban specialty hospital are covered under one or the other of the urban medical systems. The doctors are familiar enough with the urban policy to know what is covered and what is not, but generally they have no idea of the NRCMS policies, and with their incredibly busy schedules, they do not have time to learn about it. It is therefore very likely they will prescribe, for instance, a medicine that is not on the list for NRCMS, and the patient will have to pay for the entire cost with no reimbursement. The nurse I interviewed said that there is a tendency as well to over-prescribe and over-treat because of the willingness on the part of urban patients to accept the doctor's advice without question, and the patient's ability to pay for

the drugs prescribed. This happens less frequently at the county hospital level because the rural residents are unable to pay for excessive prescriptions or care.

One would think that it would be a simple matter to find the information about coverage and medicines in a database, especially since the medicines on the NRCMS list are also covered under the urban systems. But the urban list doctors have easy access to on computers does not indicate which of the medicines also appear on the NRCMS list.

Because of time limitations, I was only able to visit one specialty hospital in Kunming, the capital of Yunnan Province. It was very difficult to interview any of the doctors simply because they were so busy that they did not have time to talk to me. I was able to interview a pharmacist, however, who told me that the doctors in the hospital do not really know anything about the NRCMS, other than what it is and that some of their patients are in that system. They know when they have NRCMS patients, because instead of showing them an ID card (which is what people in the urban areas carry), they bring their red booklet with handwritten entries. Further complicating matters is the fact that different counties in Yunnan have different policies within the NRCMS, and it would be impractical for the doctors to know all the details of all those policies. As a result, it is the practice of the hospital to charge a flat fee for services no matter where they come from, and if the patients are entitled to reimbursement, they have to get reimbursed by their county.

In some cases, the hospital will spend time trying to figure out what the NRCMS patient's actual coverage entails, and enable the patient to pay only the amount in excess of their reimbursement entitlement. Because each county has its own requirements, and because the technology infrastructure—including the Internet connection—is so slow and

unreliable, this process can take hours. Patients often have to wait a very long time to get their bill so that they can check out of the hospital. I spoke to one man who had waited more than five hours just to get a reckoning of the amount due and, as a result, had missed the bus he was going to take back to his village, adding to the financial burden of his visit with another night's stay.

Once a patient pays his share, the hospital then invoices the county directly, and the county remits payment back to the hospital once a month. One of the administrators I spoke to told me that there are some counties who are very lax about paying in a timely way and the hospital can wait months for reimbursement. This is obviously an untenable financial situation and fewer and fewer hospitals are operating this way, instead, passing on the entire bill to the patient, who then has to figure it out for himself how to get reimbursed.

It was difficult to interview many patients, because those who had come to the urban hospital were seriously ill. I spoke to a relative of a patient, a farmer who came from Yuxi County. This man told me that although the NRCMS has increased its percentage of coverage every year, it seemed to him that prices of medicines and treatment are rising at the same time, so everyone is still spending just as much money. He was not just imagining this. According to Zou et al., of Kunming Medical University, the rate of increase of inpatient fees has steadily risen from 2010 to 2013. The increases were 1.22% in 2010-11, 4.65% in 2011-12, and 5.16% in 2012-2013. Further, this study pointed out that in 2012, the specialty hospital in Kunming treated 980 people with serious diseases, and 931 of them had diseases that were not covered by the NRCMS and had to pay the entire cost themselves. 98% of the patients with serious diseases could not

use their NRCMS coverage at the specialty hospital.[43] This is one clear similarity with the finding in Blume's study. One of her respondents suggested that it should really be the other way around, that rural patients should be reimbursed more at the county and city level hospitals, because their diseases are more serious and more expensive to treat.[44] This is a radical idea and probably completely impractical given the way the system is currently set up, but the same could certainly apply in Mojiang County.

The most communicative person I talked to was a nurse who had just finished her shift. She had many stories and anecdotes about hospitals, and gave me some insight into the doctor-patient relationship in the hospital. One extreme example was the story of a young doctor, fresh out of medical school, who was giving a cancer patient an X-ray. The patient was in pain and not being handled very well and, when the patient left, he was so distraught that he returned with a knife and stabbed the doctor to death. The nurse acknowledged that the system at the hospital simply did not allow for much compassion for the patients and she said she felt bad about that. She witnesses the stress and the pain of the patients every day. I myself observed a long line of people, some rolling IV stands, waiting for a long time just to get a blood test. It was like an assembly line in a factory. The nurse blamed a system where pressure from above made staff work very fast and, even with their best efforts, they could not reduce the long waits or improve their ability to provide compassionate care for the patients. She felt that the hospital staff were sandwiched in the middle.

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43 邹敏、尹芹、陆烨和俞群俊（2015）：对昆明市某三甲医院新型农村合作医疗重大疾病政策执行状况的分析，《辽宁医学院学报》，13（1），55。

44 Blume, *The New Cooperative Medical Scheme in China*, 66.

Conclusion

According to an internal proposal from the Mojiang NRCMS office, it is clear that the Mojiang County NRCMS management knows that improvements are needed, especially at the level of the village doctor.[45] Their aim is to ensure that villagers and farmers have easier access to healthcare when they need it and to make it more affordable for them, as well as to increase the usage rate of existing facilities. Their ultimate hope is that the overall health of the rural population will improve, thereby enabling rural residents to be more productive members of Chinese society. They state a goal of having 95% membership in NRCMS in Mojiang County. This is a substantial increase from the current 85.2% membership.

As part of their planning to try to meet this goal, the document proposed that the NRCMS should:

1. Give village doctors clear direction as to their role and responsibilities, improve their compensation package, and stabilize the village doctors to reduce turnover.
2. Aim over the next 10 years for all village doctors to have at least a technical school certificate.
3. Put at least one village doctor in place for every 1,000 people.
4. Where possible, have two doctors, one female, one male; one with knowledge of both Western and Chinese medicine.
5. Give village doctors training twice a year in a bigger city so that they can improve their skills and competence and regularly evaluate their performance.

[45] 关于进一步加强乡村医生队伍建设的实施方案（2015.4.8），墨江哈尼族自治县人民政府办公室文件。

6. Enforce a retirement age of 60, and ensure that retired doctors can survive well on a decent pension.
7. Improve Internet access and training on use of the computers to build up the database so that it can be more useful.
8. Protect village doctors with liability insurance.

This is a good indication that those who administer the NRCMS have some understanding of many of the faults in the system, like those that I was able to identify while interviewing patients and doctors.

However, having goals for improving the NRCMS is one thing; knowing how to achieve them and having sufficient funding to achieve them is another thing altogether. Although the proposal above accurately identifies a lot of areas for improvement, like all the NRCMS policies, it is something that would be imposed from above, not taking into account necessarily the views of the people who are actually using the healthcare or working in the village clinics and town and county hospitals.

The areas I identified in my research that, in my opinion, are in critical need of improvement are:

- Top-down administration that does not take villagers' specific needs into consideration
- Misplaced funding priorities
- Inadequate and outmoded network and Internet infrastructure
- Siloed administration systems with no interconnection, leaving room for waste and corruption.

Because I was seeing everything from the outside, some of the shortfalls of the system were patently obvious to me, while others emerged only after I had spoken to patients and doctors. Rather than focusing on policy and ideal outcomes, I think much could be achieved to improve healthcare in Mojiang County by simply looking at the problem from a different angle.

Without an in-depth knowledge of available funding and costs or exactly how high level decisions are made, it is difficult to propose changes that one knows could be put into practice. Nonetheless, it is clear to me that the problems inherent in the NRCMS are capable of being solved with a fresh perspective and openness to new ways of thinking. These should include ideas that are centered on the individual and that take the unique qualities of the region and its inhabitants into consideration, rather than focusing on the system itself and trying to achieve an ideal that is established by a distant central administration.

Below are a few ideas that, with the right funding and priorities in place, could improve the delivery and effectiveness of healthcare in rural Mojiang County. In order to come up with solutions for other counties, it would be necessary to do a similar kind of fieldwork as I have done in Mojiang County and discover the different needs and limitations specific to those other areas. This is essentially what Blume has done in her fieldwork in Fujian Province, albeit now out of date. Her suggestions are very specific and related only to the actual workings of the system in that province. Mojiang County is unique in its ethnic composition and its geography, which means that several of the points below would not necessarily apply anywhere else.

1. **More direct connection with villagers**

My first observation was that villagers did not understand all the benefits of the NRCMS system. From my limited experience with the Hani people, it seemed clear that they would prefer to have more information in order to come to their own conclusions without having it simply imposed from above.

In Mojiang County, the NRCMS should make a bigger effort to connect with the people in a way the citizens are able to appreciate and help them understand on a deeper, personal level the benefits of joining the NRCMS. The Hani people I met made it clear to me that they were wary of government involvement in their lives, but would welcome anything where they could see a clear way they could benefit. They are fiercely independent and unwilling to take charity from others, but I got the sense that if they felt some kind of ownership over the system, and that it truly applied to them, they would be more likely to become members. For instance, having more control over which medicines they are allowed to take, and which hospital they can go to would be important to them.

2. **Information available in local languages**

Related to the point above, in Mojiang County, there is a real communication barrier for many people. Giving out written literature, which many older people cannot read, or sending an official who only speaks Mandarin to communicate the policies and the benefits of the NRCMS is simply not sufficient. It would be ideal to have someone who can speak their dialect to go out among the farmers and villagers and tell them face-to-face about the NRCMS and why it is important for them to join.

I witnessed for myself how ineffective communicating solely in written Chinese was in Mojiang County. The pink flyer that I mentioned earlier explained an important

change in policy that could benefit many villagers, but it was printed in tiny Chinese characters. The villagers I saw who were given the flyer glanced at it, but did not read it. Instead, in some cases, they put it on a dirty bench so they could sit on the bench without soiling their clothes. I hardly think this is the outcome the NRCMS officials intended.

3. Greater respect for, and value of, village doctors

This point is well captured by the NRCMS proposal quoted above. Without earning a living wage from their job, village doctors often have to find supplemental employment—working in the field, for instance—to supplement their income. The village doctors are responsible for all primary care in the village, and should be acknowledged for the important role they play. Unlike the doctors in the town or county hospitals, there is no one to serve as backup or to take over if the doctor him or herself is ill. Although admittedly village doctors are not often faced with a life or death situation, nonetheless they are the first line of care and a person the villagers trust. Further, in the event that a mistake is made, the village doctor has no protection against liability and could face financial disaster.

Such key people in the healthcare delivery system need to be more valued, to be given a wage that they can live on and not have to do an exhausting additional job. A more competitive salary, and the respect that goes along with it, would do a lot to encourage more capable people to become village doctors, and to keep them there instead of having such a high turnover.

In Mojiang County particularly, with its unique ethnic character, it would be preferable to recruit more Hani people to take on the job of village doctor. They would

know the culture and the people better and would have an easier job communicating and gaining people's trust. Higher pay and benefits would no doubt help in this case as well.

4. Training on and use of technology and diagnostic equipment

Several village clinics have computers that are supposed to connect to an NRCMS database to help with managing medication supply and make it easier to access patient records. Unfortunately, in most cases, the doctors do not know how to use the system and, in places where they do, the problems with Internet access and the general instability of the computer network render the technology basically unusable. An investment in training and infrastructure would make a huge improvement in the ability to deliver healthcare in remote, rural parts of the county. Getting supplies of medicine and other equipment the village clinics need would be much more efficient, and perhaps help avoid a situation where someone comes to the clinic for a particular medicine and it is not yet there.

Similarly, the more sophisticated diagnostic equipment in the town hospitals goes unused for lack of technicians who know how to use it and lack of monetary incentives to do those tests. Patients who need an X-ray or an MRI must instead join the crowds of people at the county hospital. If the town hospitals were willing and able to perform these tests, it would substantially reduce the burden on the county hospital.

5. Villager-centric policies

Policies that seem logical from the perspective of the NRCMS are not always practical from the perspective of the villagers. For instance, if a village doctor were given the training to confirm that one of the patients he had seen for many years had a chronic disease (like diabetes or arthritis) and should be covered under the special policy that

gives bigger reimbursements for necessary medication and treatment, a costly and bureaucratic process could be avoided. As it is now, a villager who is already being treated for diabetes, in order to qualify for the new policy, has to have documentation that often necessitates a trip to the county hospital. This is a waste of time and money in many circumstances. More training for the village doctors might also lead to a greater level of overall confidence by the NRCMS.

Another example of ignoring the impact at the village level is the way the medical waste is handled by the village clinics. Thinking through the environmental impact on the villagers would force the NRCMS to come up with a practical solution that is safe and sanitary.

Overall, in setting policy, an effort should be made to start from the position of what the villager needs, what the practical considerations like transportation and finances are, rather than from what the NRCMS wants to deliver. Being more responsive to feedback from the village doctor about what is required would be helpful. As it is, the doctor has no voice in setting policy at all. One example is that if villagers complain that a medicine they need is not on the list, there is no process in place for getting that medication considered for inclusion. Likewise, there is a discrepancy between the diseases that the NRCMS will cover and the diseases that are actually treated on a daily basis. It seems from the perspective of the villagers as if the system is too inflexible to accommodate changes based on accumulated data.

6. **Mobile clinics**

In a place like Mojiang County with its mountainous terrain and limited availability of transportation, the NRCMS should consider the possibility of providing a

mobile clinic in addition to the stationary clinic in the village center. Although there would still be people who could not be reached by road, it would bring the care closer to where they are, making it easier and less time-consuming for the villagers. With so little equipment in the clinic, such a mobile operation would not require an elaborate vehicle. It would just be necessary to have something enclosed and able to transport more cargo than a motorbike can, which is what the doctors are using right now. It wouldn't even involve much change in practice because doctors are accustomed to doing house calls on occasion. The benefit in remote areas would be considerable. For the farmers, it would mean less time away from work, and for the doctor, less travel, because what might have necessitated multiple house calls for those who have phones could be combined into a single remote trip.

7. NRCMS representation in specialty hospitals

When a farmer from a small village goes to a specialty hospital in a city, just making the trip and experiencing the bewildering urban environment can be overwhelming. Add to that the frenetic pace and crowded facilities of a specialty hospital and someone from a village, who is accustomed to being on a first-name basis with his doctor, could be completely at sea. Even more than not being familiar with the NRCMS policies, the urban doctors are accustomed to treating a completely different kind of patient with different expectations and financial capacity. There is no consideration of whether a patient can afford the prescribed medicine or an additional, but not essential, treatment. The doctors do not necessarily understand that a villager could have to choose between buying food and buying medicine or making the long, expensive journey back to the hospital to get another test or checkup. Further, even if the doctors wanted to

understand the villager's perspective, they simply do not have time to care on an individual level because of their punishing workload.

One way to help alleviate this situation is for specialty hospitals in the cities to have an office, or at least one employee, who is thoroughly familiar with the NRCMS policies so that those who are on that system have someone to go to for help or information. In addition, this person should be attuned to the needs and sensibilities of the rural patient. This liaison could help villagers negotiate the system and ensure that they are not given treatment that is not covered or that they cannot afford.

I discovered on my second trip to Yunnan province in December of 2015 that some effort had been made by a couple of urban hospitals to initiate this kind of program. However, at this time the staff who are supposedly familiar with the NRCMS and its policy do not really have enough knowledge or experience to be helpful. It will clearly take some time for something like this to be implemented in an effective way.

8. **Government/NGO partnerships**

China is fortunate in having a lot of NGOs staffed by volunteers who want to help make a difference in their society. For instance, Chinese NGOs have long had an important role in containing the AIDS epidemic, working in concert with NGOs from other nations. Other Chinese NGOs are environmental activists, who also provide disaster relief. They are funded by donations and independent of the government, but they are crucial to helping provide care and services in many areas.

The NRCMS should be open to allowing Chinese NGOs to take on some of the practical work of delivering rural healthcare, such as communicating with villagers in the rural areas. Whether this would involve making a new NGO or whether such activities

would fit within the scope of an existing NGO, this could help relieve some of the practical and financial burden on the NRCMS. This is something that is outside of the scope of this paper, but an idea worth exploring further nonetheless.

9. Improved communication and coordination between local health facilities and the central government

As I observed above, the town hospitals were given an amount of money by the central government that they could only use for a specific purpose, which was to buy diagnostic equipment that it turns out they do not—or cannot—use. This is a clear waste of valuable resources. Either something should be done to ensure that town hospitals are using the equipment they buy, thereby relieving the county hospital of some of its burden, or they should be able to identify the particular needs of these small-town hospitals—which may not be what the central government thinks they are. To do this, there has to be some system of communication between the town hospital staff and the central government where they can submit their needs and ideas and be responsible at the same time for using the resources in a less wasteful manner. It should be a system of mutual accountability.

10. Data sharing and coordination among the different medical systems

Each of the three existing medical systems is completely separate from the other, and has no means of sharing data or information. This clearly leads to a duplication of effort and makes it impossible to achieve some economies of scale. In addition, it creates an environment where it is possible for individuals to game the system to their advantage. For instance, one person I spoke to in the urban hospital administration had grown up in the countryside and moved to the city many years ago, but his father in the rural area

continues to pay his son's NRCMS membership fee. Before he started working in the city, he joined the Urban Residents' Basic Medical Insurance program, which is for people who are not employed. Then when he started to work, his employer enrolled him in the Urban Employees' Basic Medical Insurance system, yet he continued to pay the membership for the other urban system. None of the systems had any way of knowing that he was enrolled elsewhere, because they cannot share their data. Now, if he gets medical care, he can claim reimbursement from all three systems and end up making money in the process. This is facilitated by the fact that hospitals are willing to give people multiple original receipts. This results in a tremendous amount of wasted resources, and explains why the urban medical system appears to health administrators to have 110% participation.

With more time and opportunity to become even more familiar with the NRCMS and its implementation in Mojiang County, my recommendations could be expanded and deepened. In fact, there is a whole topic for consideration in a population I have not even mentioned in this paper: the mature adults who leave the villages to go and work in the city, but are still covered by the NRCMS rather than the urban system because they are still considered rural residents. These are the ones who are not gaming the system. They continue to pay their NRCMS membership fees because they are technically not eligible to enroll in the urban residents' system, and are doing menial jobs where they are earning cash under the table and their employer, for legal reasons, is not likely to subsidize their enrollment in the urban employees system. There must be tremendous challenges in getting healthcare for these people who are living thousands of miles away from where

they need to go to in order to qualify for or receive their healthcare reimbursement. With only a few months in which to do my research I could not begin to take this population into consideration.

I plan to return and continue with my fieldwork. It is my hope that more study would lead to finding practical solutions for the problems that are preventing the NRCMS from effectively delivering healthcare to everyone in Mojiang County.

The NRCMS has made a good start and solved many of the inherent problems in delivering healthcare in a vast country with widely distributed populations. Although there is room for improvement, with vision and openness to new ideas, I believe it is possible to achieve the ultimate goal of quality healthcare for all of China's population.

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