

Preliminary Community Needs Assessment

Ayang Monastery and **Rimaa Village**
Upper Rashu Township, Yushu County
Qinghai, China

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Becky Loy, Ph.D. (Dawa Lhamo) and
Nancy Chin, M.P.H., Ph.D. (Drolma Chön Tso)



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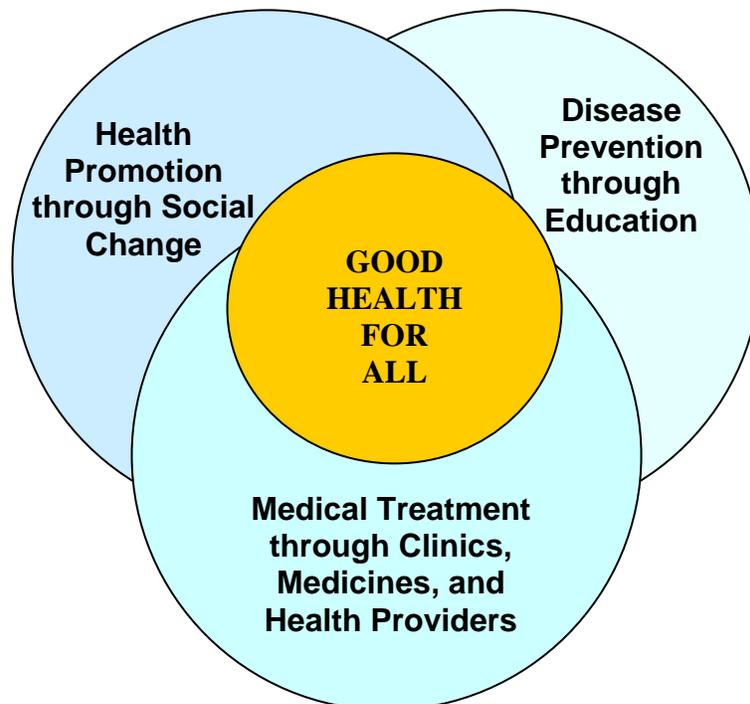
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*"Deaths are worse now than in the past.
Now women are afraid to get pregnant."*

-An elderly woman from Rimaa Village

A. Introduction

At the request of Ayang Rinpoche, Spiritual Director of Ayang Monastery in Rimaa Village, Tibet, Becky Loy and Nancy Chin made a preliminary site visit in August 2004 to explore the possibilities for promoting economic and health development in the region. Rinpoche's primary concern was the perceived increase in maternal mortality. Our approach to this request was to take a **combined medical-public health approach** to investigating village-level health problems. A medical approach uses the individual as the unit of analysis: it is focused on cure, technologies, and medicine. A public health approach uses the community as the unit of analysis: it focuses on disease prevention and health promotion; it uses local knowledge and materials when possible. This report summarizes our activities, outcomes and proposed next steps.



The Village site visit team consisted of Loy, Chin, Mr. Sangye and his two colleagues from the Political Cooperation Bureau, a Tibetan physician-midwife from the Yushu County Hospital, two members of the government travel agency, and a Tibetan-Chinese-English translator. The entire site visit and networking could not have been accomplished without the outstanding support and work of the Vice Chairman of the Political Cooperation Bureau, Mr. Sangye, and his wife Muntso, who hosted us.

B. Setting

We traveled to Rima Village by first flying to Xining, capital of Qinghai Province, then by bus 18 hours to Jyekundo (Ch. Yushu), the capital of Yushu Prefecture. The village is located in Rashi Township, Yushu County, and is 3 1/2 hours drive by jeep from Jyekundo, the last 25 km of which is across unimproved pastureland.



The Village is comprised of approximately 2,800 nomadic people in 500 households. It is divided geographically into four communities, although there is no single population density or village center in a Western sense. Their summer encampments are at approximately 4,500 meters, almost reaching the maximum altitude for supporting human life. Most of the nomads move twice a year.

A Village Leader and a Secretary govern the village and report to the Township authorities. Ayang Monastery, with 52 monks and lamas in residence, provides spiritual guidance, and is centrally located to the population on the shores of Lake of 21 Taras (also called Lake of Compassion).



Life on the Tibetan Plateau is harsh, with extremely cold winters and a short growing season. Because of climatic changes and recent severe winters, grazing lands are degenerating and yak populations have declined, resulting in further economic hardship. The main sources of nutrition are yak meat and milk products and roasted barley flour (tsampa). Vegetables are not a usual part of the diet and gardens are uncommon.

C. Activities

(1) Networking and obtaining village and governmental permissions

We were fortunate that Mr. Sangye introduced us to county- and prefectural-level officials and hospital administrators in Jyekundo before we traveled to Rimaa Village. Also, our four-day visit to the village coincided with a festival at which over 300 villagers were gathered near the monastery.

Table 1 summarizes the contacts we were able to make during this trip. All identified stakeholders -- government officials, village and monastery leaders,

Table 1 - List of Contact Individuals

Institution	Contact Person	Role in Project
Ayang Monastery, Rimaa Village	Lama Panchog, Abbott	Hosted Rimaa Village site visit team; helped identify health problems
	Ayang Drupchen Rinpoche, Resident Lama	Blessings, teachings
	Ayang Agu Rinpoche, Resident Lama	Blessings
Rimaa Village	Ngo Zone, Leader	Identify health problems; facilitate future research
	Konchog Pema, Former Secretary	Identify health problems; facilitate future research
	Sonam Nyima, Secretary and son of Konchog Pema	Identify health problems; facilitate future research
Political Cooperation Bureau, Jyekundo	Yi Ong Ga, Chairman	Government liaison to nomads; accompanied team on Rimaa Village site visit
	Jamyang Lodro, Assistant Director	Government liaison to nomads; accompanied team on Rimaa Village site visit
Yushu County Government Office, Jyekundo	Wu De Chun, Vice Leader, County Government	Collaborating partner in financing midwifery and doctor training
Yushu County Hospital, Jyekundo	Tse Ring Zang Po, County Hospital Leader	Collaborating partner in midwifery and doctor training; recommendations for clinic equipment and medicines
	Nyima, County Hospital Vice Leader	Collaborating partner in midwifery and doctor training; recommendations for clinic equipment and medicines
	No Kyi Zomo, Midwife-Tibetan doctor	Accompanied team on Rimaa Village site visit
Yushu Prefectural Maternal and Child Health Hospital, Jyekundo	Sonam Osel, Director	Referral network person for difficult labors
Tibetan Medical Hospital, Jyekundo	Chu Di, Director	Help identify health problems and potential solutions from Tibetan medicine; potential source of medical education for villagers and/or monks
	Dr. Sonam Draba	Tibetan medicine perspectives on maternal and child health
Snowland Service Group, Jyekundo	Rinchen Dawa, Director	NGO perspectives on development projects in region; local resource identification and management
The Bridge Fund, San Francisco	Jackson (Gongchuk Gailung), Yushu Prefecture Program Coordinator	NGO perspectives on development projects in region; local resource identification and management
	Bob Ankerson, Projects Director for Kham	
Qinghai Education College, Xining	Kevin Stuart, faculty, Nationalities Department	English language educator; will identify translators for project
	Dawa Yangdron (Loretta)	Translation
	Wen Chang (Evan)	Translation
Number 2 Hospital, Xining	Dr. Limusishiden	Medical contact experienced in health outreach to Mongghul community

and hospital administrators -- enthusiastically endorsed and supported our project development and research. Village leaders were impressive in their desire to cooperate and in their concern for women's health.

Becky practicing her Tibetan with monks from Ayang Monastery (left); Nancy interviewing Rimaa women, with the assistance of DaYang, our translator (right).



(2) Discussing with Monastery and Village Leaders and with Village Members Their Perceptions of Health

(a) Maternal Health. In meetings and in informal conversations, Loy and Chin explored local perceptions of health, focusing especially on maternal mortality. This provided the opportunity for local residents to describe their health problems using their own words, concepts and concerns. Immediate causes of maternal death were consistent with other research done in Himalayan Buddhist villages and include:

- Hemorrhaging
- Infection
- Obstructed labor
- Retained placenta
- Hypertension/Eclampsia

"For the few women who have gone to hospital it has not helped because of the bad roads."

Former Secretary, Rimaa Village

Based on our own observations and previously published studies, intermediate causes of these problems may include:

- Poor maternal nutrition (suspected vitamin A and D, calcium, iodine and/or iron deficiencies)
- Heavy maternal physical work load

- Unclean delivery environment and knife to cut umbilical cord
- Indoor air pollution (inadequately ventilated stoves; cigarette smoke)
- Stress of high altitude adaptation to hypoxia, UV irradiation and cold
- Lack of village doctors, medicines, or village clinic
- Lack of knowledge of prenatal care and disease prevention and health promotion
- Poor access to advanced health services due to scattered population and inadequate roads
- Inability to pay for hospital care

"The reason women die in childbirth is the altitude, they are poorly nourished, they are tired, they have poor living conditions."

Physician at Tibetan Medical Hospital, Jyekundo

Underlying factors which need to be explored further are potentially changing gender roles and household composition; survival of grandmothers, aunts and sisters as childbirth instructors and attendants; male migration in and out of the community with more efficient motorcycle transportation; state-level changes in the ability to provide rural health care; climatic changes resulting in more severe and dangerous winters that have produced deteriorating grasslands and a more fragile local economy.

(b) Adult Health. Health practitioners in Jyekundo as well as villagers discussed general health problems of adults, including arthritis (especially of the knees), gall bladder disease, liver disease, hypertension, stroke, heart disease, tuberculosis, hepatitis, appendicitis, toothaches, headaches and "women's diseases".

There is reportedly no HIV in the region yet; however, it will eventually reach here. **This is potentially a very dangerous situation, and should be addressed proactively before a crisis occurs.**

Another significant concern is the growing prevalence of smoking among men. Cigarette smoking is detrimental not only to the smoker, but also to those who inhale the smoke second-hand, particularly children. **We recommend that smoking men consider quitting.** Many of those men who don't smoke do use snuff, an addictive tobacco product harmful to the health of the user.

(c) Child Health. Diseases of childhood mentioned in conversations include diarrhea, colds and measles. Villagers brought to our attention two children with bone malformations that could be consistent with Kashin-Beck syndrome or with skeletal fluorosis (from poor quality brick tea), both of which have been reported in other areas of Tibet. We also



observed at least one other child with this condition and were told that this was not uncommon in the region. Nomadic children are not routinely immunized due to the distance and cost, and vaccine cards documenting immunizations were not provided to the families we talked to.

(3) Distributing Vitamins, Sunglasses and Eyeglasses

We brought with us 10 bottles of chewable multiple vitamins and gave these to the Village Leader, who will distribute them to pregnant women. We intended this to be a first step in improving maternal nutrition and healthy childbirth. In addition, we gave out 50 pairs each sunglasses (to help prevent cataract-related blindness) and eyeglasses, donated by the US organization, Unite For Sight.

(4) Observing Current Practices of Hygiene, Sanitation and Care for the Environment

(a) Hygiene. In terms of personal health behaviors, bodily cleanliness is paramount in the prevention of infectious diseases and their spread. We didn't see any evidence of hand washing or bathing, not did we see the material items such as soap or clean water that would support these behaviors. It is standard Western practice in households, hospitals and restaurants to wash one's hands frequently. Lack of hand washing before food preparation can lead directly to diarrhea and/or hepatitis. Many times we witnessed people fill a stove with yak dung fuel and then directly turn to cooking. Good personal hygiene can reduce the incidence of respiratory infection, diarrhea, tuberculosis, hepatitis A, and postpartum infection.

We saw evidence of tooth decay and abscesses. Regular tooth brushing can prevent dental problems and reduce the need for costly, painful dental work.

(b) Sanitation and the environment. The pristine Lake of 21 Taras is likely to quickly become contaminated with refuse, litter and human waste. This is both unsightly (thus discouraging pilgrims and tourists) and unhealthy (leading to the spread of disease). There do not seem to be mechanisms in place for

"If people desire to be healthy, we must protect the natural ecology."

Dan and San, Qinghai Tibetan Medical College

the collection of trash, the disposal of human waste, or the purification of water. One uncovered latrine is in use at the monastery building site, but otherwise we saw no evidence of sanitary measures that would address these problems. Human waste, if not properly disposed of, can contaminate water sources. Likewise, trash can pollute water, rendering it undrinkable and killing fish, birds and plants around it, thus ruining the purity of the setting. According to Dan and San of the Qinghai Tibetan Medical College (International Conference on High Altitude Medicine, August 2004), preservation of environmental purity and balance (the external environment) is essential to the maintenance of individual purity and balance (the internal environment). They write, "If people desire to be healthy, we must protect the natural ecology."

(5) Reflecting on Education, Medical Training, and Vocational Programs

Village-level primary education forms the basic foundation for health awareness, medical training and vocational programs. There is currently no village-level school, and lacking such basic education, nomads are unable to take advantage of advanced opportunities for job training. Although the international health literature has consistently demonstrated a direct correlation between women's education and child survival, experts have no specific reasons why this would be so.

There are at present no health workers in the community. A site for future construction of a village clinic has been identified about 8 km from Ayang Monastery. The County government office and the adjacent County Hospital spontaneously offered to collaborate in the training of four midwives and a doctor to staff the yet-to-be-built clinic. This generous offer, which would

guarantee some degree of sustainability, may not be feasible if we cannot identify literate nomads with a basic education. Trying to recruit outsiders to fill these positions would be difficult and it is equally difficult to gain a commitment to a remote rural outpost. Being able to fill these positions with people from the community would be ideal, but may not be practical given the current lack of education. At the Tibetan Medical Hospital a resident doctor and the Director suggested that it might be appropriate to train a monk as a doctor for the Village, which they would do at reduced cost in deference to Rinpoche.

When we asked a group of nomadic men why an educated woman might have healthier children than an uneducated woman, they replied:

"We don't know. We have never met an educated woman."

Vocational training is similarly restricted for nomads because they don't know how to read and write, thus blocking them from potential cash careers in construction, motorcycle maintenance, etc.

(6) Exploring Possibilities for Economic Development in the Region

The three main sources of income in Yushu County are collection and sale of caterpillar fungus (a highly prized medicinal product used by the Han in Eastern China), government employment, and sale of yak products. Unfortunately, there is no significant growth of caterpillar fungus in Rimaa Village, limiting their economic resources to herding. However, the beauty of the setting has spurred recent interest by the governmental travel agency, and may result in an influx of pilgrims and tourists.

We talked to the Vice Director of the Yushu County Government Office and to two NGOs active in Yushu County in order to get a better idea of resource management, project implementation and challenges to sustainability in economic development. Mr. Wu of the Yushu County Government Office encouraged us to consider supporting the production and marketing of Western-quality yak cheese, a development project that recently received funding by the Trace Foundation and which was enthusiastically supported by local NGO leaders, as well. Mr. Wu also suggested vocational training in the areas of construction work, tailoring, waitering,

Main Sources of Income

- 1. Caterpillar fungus**
- 2. Government jobs**
- 3. Herding**

truck driving, blacksmithing, and health care work. He also suggested training craftsmen in Tibetan handicrafts, such as jewelry, ritual items and masks. He was also of the opinion that the nomadic regions were overpopulated and that migration of nomads into Jyekundo would be the best solution to promote literacy and vocational training.

We talked to project directors from both The Bridge Fund and Snowland Service Group based in Jyekundo. Rinchen Dawa of the Snowland Service Group gave us ideas about development projects that could lead to decreasing maternal workload, including tsampa mills and dairy operations that would preclude the need for women to make yogurt or churn butter on a daily basis, and increase their cash flow. Other ideas for community development included:

- Motorcycle maintenance and other vocational training
- Knitting factory for export of sweaters and other yak wool goods (one reportedly exists in Xining, but a local one went bankrupt)
- Development of value-added products from caterpillar fungus for export to Eastern China
- Carpet factory -- existing one has recently been purchased by Western entrepreneur
- Micro lending to nomads

D. Outcomes

We were warmly received everywhere we visited. People encouraged our participation and seemed to trust us based on the reputation of Ayang Rinpoche. Loy was careful to follow Rinpoche's instructions and thanked officials for all the efforts they are currently making to address the health and economic challenges of nomadic life.

(1) We presented villagers with the example of Mongolian Maternity Waiting Homes, where pregnant women in their last trimester went in order to rest, receive increased nutrition, and be attended at birth by a trained midwife. The villagers didn't seem to be receptive to this idea at this time.

(2) We have established a collaborative relationship with the Yushu County Hospital (given verbally) and the Yushu County Government to train and staff the Village Clinic and to provide ongoing salary support, a basic medical kit, continuing education and standard practice guidelines. The initial training of the doctor and midwives will have a focus on maternal and child health. An

experienced doctor will be sent from the hospital for additional on-site training if the new doctor has many questions. In exchange, Loy has agreed to raise money internationally to pay for clinic construction, acquisition and equipping a mobile clinic/ambulance and to provide medicines for the clinic.

(3) The County Hospital Director provided us with a list of essential equipment needed for functioning of the clinic, particularly for the examination of pregnant women, including EKG, ultrasound, blood drawing, serum and urine analysis, centrifuge, generator, sterilizer, lights, operating table, surgical instruments for removal of infected IUDs, and basic medical and office furniture.

(4) Mr. Sangye has written a letter of invitation from the Ayang Monastery Management of Community Development that will allow Chin to apply for US Federal funding to pursue public health research in Rimaa Village.

(5) We had a frank discussion with village leaders before we left, and pointed out that although clinics, doctors, equipment and medicines are essential to a safe birth, there are steps they can take right now that will make a difference for women during childbirth. We stressed the need for a clean delivery environment and clean instruments with which to cut the umbilical cord. Further, we asked them to consider ways in which women's workload might be decreased in the final trimester of pregnancy.

(6) We developed several hypotheses that may account for increased maternal death in recent years:

- Climactic changes resulting in more severe winters and degradation of grazing lands may contribute to decrease in household income;
- Reported physician recommendation that pregnant women not eat meat or meat soup may have had a negative impact on maternal nutrition, particularly iron levels (critical to recovering from blood loss), vitamin A (known to prevent maternal deaths), and protein (essential for recovering strength);
- Increased mobility of male nomads due to introduction of motorcycles, may have resulted in absence from household and increased maternal workload;

- Increased tobacco use, particularly of cigarettes, may have impaired ability to fight infections; promote acute respiratory distress and infection, leading to septicemia;
- IUDs used for contraception may not work well at high altitude (Director, Yushu County Hospital), and may become infected, weakening the uterus;
- Increased sugar consumption, leading to dental caries, may provide a route of introduction of bacterial (beta-hemolytic streptococcus group A) infections that eventually migrate to the heart and damage the heart valves, leading to rheumatic heart disease;
- Poor quality brick tea containing toxic levels of fluoride is increasingly available at low cost, and this may contribute to health problems and in particular to hemorrhaging in childbirth.

E. Community Assets

Although beset by great challenges to their health, we determined that the Rimaa Village community has several strengths that will help them overcome their difficulties, including:

- The spiritual guidance and care of Ayang Rinpoche and his monks
- Proactive, concerned village leadership
- Collaboration with government officials
- Interested and concerned county government and health officials

Their active work in recruiting government assistance for establishing a local health care delivery system indicates a readiness to make changes in both their individual health behaviors as well as in community practices. Change is made possible through leadership example, altering the environment to support new behaviors and practices (e.g. the provision of birthing kits to promote a clean delivery environment, or the cultivation of gardens to enhance nutrition), and increasing knowledge of disease prevention and health promotion.

F. Next Steps

(1) Village Health

- Loy and Chin will confer with Dr. Richard Lee, University of Buffalo, about bringing a medical team next June to Rimaa Village. We suggest that the team might do the following: screen children for beta-hemolytic streptococcus group A; conduct physical exams looking for nutritional deficiencies, primarily vitamins A and D calcium, and iodine, as well as other health problems; screen for

cataract formation in the eyes; and treat immediate health needs of the community.

- Mr. Sange and Yushu County Hospital officials will attempt to locate suitable village women for midwife training, and a high-school-trained person for MCH-focused physician training, as soon as possible. Training for up to 4 midwives and the physician, as well as their salary support, will be paid for by Yushu County.
- Loy and Chin will return to Rimaa Village in 2005 to distribute sunglasses for prevention of cataracts, birthing kits to foster sterile birth conditions and reduce infection, Tiger Balm for arthritis pain, and vitamins to improve nutritional status of pregnant women, and to do public health education around hygiene. They will also encourage pregnant women to resume eating meat and meat soup.

(2) Funding and Continued Public Health Research

- During the summer of 2005 Chin will attempt to document changes in maternal mortality rates using a UNICEF approach (The Sisterhood Method).
- Loy will begin fundraising to support construction of new Village Clinic and ambulance and to provide necessary equipment and medicines (approximately \$50,000).
- Chin will file for an NIH grant, deadline October 1 to the National Institute of Child Health and Human Development, proposing a 5-year research project that will combine social research with program interventions and evaluation. The grant's abstract and specific aims are appended for Rinpoche's review and comments.
- Loy and Chin will consider preparing applications to the Department of State (deadline May 2005) for exchange programs (1) to train Tibetans in public health education and to provide materials for dissemination of public health information in Rimaa Village and other areas of Yushu County and/or (2) to train Tibetan governmental officials in business development and community planning practices appropriate for Jyekundo, as used in the West.
- Loy will apply for funding to study the potential role of fluorosis.
- Loy will follow up with Rotary International for ongoing support of research and public health intervention.
- Both Loy and Chin will continue to pursue other grant opportunities.

G. Conclusions and Summary

During our short visit to Rimaa village we were fortunate to have conversations with many people who are interested in helping the health of all residents. Several people suggested health problems that seem to have been introduced or increased over the last decades, although we lack epidemiological data to support this, and no one could cite reasons for the perceived increase. Without further research to substantiate our ideas, we suspect that the perceived increase in maternal mortality is related to a decrease in maternal nutritional status with a concomitant increase in maternal workload.

County officials were enthusiastic about training midwives and doctors for a proposed village clinic, and this will certainly help many women who have difficult, complicated births. Indeed, international consensus holds that the two most effective means of reducing maternal mortality rates in developing countries is to provide skilled birth attendants and timely access to emergency care. Although we recognize the critical need for clinics, doctors, equipment, and medicines, we saw many opportunities for disease prevention that could be implemented by the whole village. Disease prevention is much more cost-effective than cure: it is much cheaper to prevent a disease than to use expensive medicines to cure a disease; and it is much cheaper to prevent a disease than it is to take time away from work and family to visit the doctor and recuperate from a disease. Prevention also eliminates needless suffering and premature death. In taking this public health approach of disease prevention and health promotion, we follow the model used in the US to monitor and improve the health of communities, which we feel is entirely appropriate for improving health in Rimaa Village.



"Health? It just happens."
59-year-old woman, when asked what she does to stay healthy.