TSUM VALLEY IN NEPAL
A STATE OF HEALTH

photos: Nick Dawson

Report prepared for the
GLK Himalayan Sangha Project
Frances Howland
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Contents

Executive Summary

This report follows a visit in June 2005 to Tsum Valley known as Beyul Kyimolung which translates into the Hidden Valley of Happiness. The Upper Tsum Valley (called Chekampar in Tibetan) is located in the northern most region of Gorkha District, Kandaki Zone, inside the Manaslu Conservation Area. It lies north of the Ganesh Himal and is surrounded on three sides by Kyirong, Tibet.

For centuries people in this remote border area have depended on subsistence agriculture, grazing herds of yak and dzo and barter trade across the border to Kyirong. This cross-Himalayan trade of Tibetan salt for rice and other goods from Nepal, which has been an essential source of income since time immemorial, has given way in recent years to one sided trading. Even rice and vegetable oil are now cheaper when purchased from Tibet. The exception is the annual yarsa gumba (caterpillar fungus) trade that is traded from Tsum to Kyirong every summer; this gives vital income to the Tsumpa.

Tsum which was almost completely neglected by government development efforts in the past suffers even more so nowadays due to the Maoist insurgency which controls much of the area from lower Tsum along the Budhi Gandaki river towards Kathmandu. The situation in terms of health, sanitation and education, where government intervention is essential, is catastrophic and the area remains one of the poorest in Nepal.

The estimated population of upper Tsum is 4,000 [1]

The purpose of this report is covered by the terms of reference for the visit.

Health Advisor Terms of Reference (TOR)

a. Conduct a health survey to assess the health care needs of the Tsum pa.
b. To visit and assess existing health care workers and facilities.
c. To provide medicines for the treatment of acute illnesses.
d. To identify future health care workers who can be trained.
e. To make a proposal for the next step.

As this report will show a number of cost effective strategies can be put in place to improve the overall health of the Tsumpa.

1. Introduction

GLK Himalayan Sangha Project-

Founded in 2004, this is a project of the FPMT International, managed by Kopan Monastery in Kathmandu, Nepal. [2]

[1] Stefan Priesner, Deputy Chief of SURF, a UNDP regional office. Article in Nepali Times issue # 201 June 2004
[2] www.fpmt.org/projects/tsum

The primary aim of the project is to improve the living conditions, health status and education of the monks and nuns living in Mu Monastery and Rachen Nunnery.

The journey to Tsum was by helicopter from Kathmandu, a thirty minute journey. The visit took place from June 9th to June 19th 2005. The helicopter was loaded with cargo for the building work at Rachen nunnery.

The health survey team comprised
Health Advisor - Frances Howland, MPH, RN, RM.
Interpreter and assistant - Venerable Chodak, a monk, originally from Chokang village in Tsum, he is a graduate of the Sarnath Buddhist Institute in India and presently the school principle at Kopan monastery, Kathmandu.
Photographer - Nick Dawson, a free lance professional photographer.
Interviewer for the Health Assessment Questionnaire - Gisele Dawson

Other members of the group were from Kopan monastery.
Gelek Gyatso Rinpoche on his second trip to Tsum this year, continuing supervision of the nunnery building work. Construction was already underway on a dining room, kitchen and class rooms, due for completion this year.
Venerable Jigdol assistant to Rinpoche.
Venerable Fran Mohoupt who assists with the international promotion and fund raising for the project.
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2. Context

The health assessment mission covered the five areas of the terms of reference.

a. Conduct a health survey to assess the health care needs of the Tsum pa.
Eighteen questionnaires were completed.

For details see -
Appendix 1 - Health Assessment Questionnaire
Appendix 2 - Results of each Health Assessment Questionnaire

HEALTH PROBLEMS OF THE SANGHA

Rachen Nunnery

Established in 1936 there are now eighty nuns living here, the eldest is 73 years and the youngest 7 years. The nunnery school has 50 students who are school age nuns and five village children including four boys. There are three classes covering grades 1 to 6 taught by one teacher, Mr. Samten Dorje.

Geshe Chokli, a Tibetan Lama who studied in Sera monastery, South India arrived in March 2005. Geshe la divides his time teaching between Rachen Nunnery and Mu Monastery four hours away.

The nunnery manager is Kopan monk Tenzin Lhundup who has been there for one year and will stay for one more year.

See ***Appendix 2*** for details of the school teacher and nuns' answers to the Health Assessment Questionnaire.

Mu Monastery
Established in 1921 and located four hours North of Rachen nunnery, the monastery is located at an altitude of over 4,000 meters (12,000 feet). It is two days by horse from the Tibetan border.

There are nineteen monks living here, seven are older monks, over sixty years.
The monastery cook and school teacher are not ordained. The young monks attend classes in Nepali and English language.

Geshe Chokli travels between Rachen nunnery and Mu gompa.

Summary of the questionnaire's findings for the sangha
Many of the complaints were chronic and had lasted many years.

The most common health problems were -
i. Gastritis, indigestion, stomach pain.
iii. Arthritic type joint pain
iv. High blood pressure
v. Eye problems. Reading glasses needed for those over 40 years old. Cataract older people.
vi. Headache
vii. Diarrhoea

Some of the nuns and monks had been to Kathmandu the previous winter and received a medical check up and were subsequently taking medications for chronic illness, including high blood pressure.

HEALTH PROBLEMS OF THE TSUM PA
There were very few young men in the villages. It was the height of the annual collection in the hills of yarsa gumba (this 'winter worm summer grass', *Cordycep Sinensis* is a caterpillar fungus) prized for its medicinal qualities.
The yarsa gumba is then traded in Kyirong, Tibet for high prices and many families depend on that income throughout the year.

Summary of the questionnaire's findings for lay people
See ***Appendix 2*** for details of the answers to the Health Assessment Questionnaire.

Many of the complaints were chronic and had lasted many years.
The most common adult health problems were -

i. Gastrointestinal complaints were the most frequent and ranged from indigestion, burning stomach pain; most likely either gastritis or gastric ulcer disease. These symptoms are exacerbated by the large quantities of home brewed alcohol (rakshi) consumed by both men and women.
ii Diarrhoea, lack of hygiene and access to clean drinking water.
iii Itchy and burning eyes, exacerbated by living in smoke filled houses.
iv Joint pain, arthritis.
v Headache, this could also be exacerbated by smoky houses.
vi Tooth pain, gum disease and decaying teeth, visible in most adults.
vii Accidents. A number of adults were seen who had broken bones and other injuries sustained in accidents and injuries sustained while drunk.
viii Cataract, elderly people complaining of cloudy vision.
ix Cough

Interview with the Rachen school teacher Samten Dorje.
He dispenses some western medicines to sick people from the nunnery and from the nearby village.
See his interview ***Appendix 2***

Most serious health related problems
Lack of sanitation.
Two to three times a year young men are injured fighting with knives, usually they are drunk.

Children
Cough, headache, worms are the most common.

Women
Noticed that nuns are absent for one or two days per month for the "monthly disease" menstruation, "but they don't speak about it".

What are the priority needs for Rachen nunnery
Toilets
Washing facilities.

Interview with the Health Assistant in the Chokang government Health Post
See his interview ***Appendix 2***

Main reason people visit the Health Post
Diarrhoea – in the hot season
Cough – during the season change.
Tooth pain – the health assistants are unable to extract teeth, they give painkillers.

Tuberculosis (TB) and Hepatitis
TB – Health assistant had not seen any cases recently, there was one in another village. They do not have any treatment for TB in the Health Post.
Infectious viral hepatitis (hepatitis A & E) – no cases documented.

Interview with the two Traditional Tibetan Medicine (TTM) doctors in the Nyile clinic
See their interview ***Appendix 2***

Main reason people visit the clinic for Tibetan medicine
Cough, fever, knee pain, tooth pain, diarrhoea and vomiting.

Tuberculosis (TB) and Hepatitis
Very little tuberculosis. No infectious hepatitis seen.

Other important adult health issues.

Hypertension
A high incidence of high blood pressure amongst the adult population. A few people had visited Kathmandu and were taking anti hypertensive medication. The major complications of untreated hypertension (diastolic blood pressure over 90) are stroke and coronary heart disease. Renal disease can also occur and retinopathy with hemorrhage in the retina of the eye.

Iodine Deficiency Disorders (IDD)
Iodine deficiency is particularly severe in the Himalayas and other mountainous areas where natural iodine is washed out of the soil and crops and animals and the population become deficient in this essential micronutrient.[3] The daily requirement is 150 micrograms per day, less than a teaspoon of iodised salt per day. Because iodine cannot be stored in the body small amounts are needed regularly. There is no iodised salt available in Tsum, it would have to be brought from Kathmandu and the Ministry of Health does not send it to this area. Local people eat Tibetan rock salt, which is affordable, easily available and traditional. However, while tasty it does not contain iodine.

Goitre (big neck disease) as a result of iodine deficiency is endemic in Tsum. Many older men and woman had visible goitre. Goitre is a nodular enlargement of the thyroid gland that can become very large, although it may cause no symptoms it can cause compression of the trachea and difficulty breathing and speaking, hypothyroidism can occur which slows the metabolism of the body, and it can lead to impaired mental function.

Pregnancy is associated with an increase in the size of thyroid nodules (goitre) in an iodine deficient woman, iodine deficiency in pregnancy leads to an increased risk of miscarriage and stillbirth. Small children and pregnant woman are the most in need of iodine.

[3] KunDe Foundation on behalf of UNICEF. A qualitative study of socio-cultural factors affecting demand for iodised salt in Tibet. March 2005.

Goitre does not shrink once iodine supplementation starts.

Cataract

A number of elderly people with cataract were seen and a list was made of at least twelve people with visible cataract. Every village said they had a few people. Two people were seen who had previous cataract surgery with intra ocular lens implant in Kathmandu. There had never been an eye camp in Tsum.

Cataract blindness is the leading cause of preventable vision loss throughout the world
Cataract prevalence is higher in high altitude environments. Tibet Vision Project states that visual blindness and impairment are much higher in Tibet. This may reflect a combination of meteorological (excess ultraviolet irradiation) and nutritional/poverty factors. There is a disproportionate bias by gender with women bearing 2/3 rds of the blindness burden[4] . The continual assault on the eyes from smoky kitchens may also lead to the high incidence of cataract seen in Tsum.

Recommendations

Train existing health workers in diagnosis and treatment of hypertension.
Request the Tilganga Eye Centre to carry out an eye camp (cataract surgery with intra ocular lens implant) in Tsum.

PREGNANCY & CHILDBIRTH

Maternal mortality rates are unknown but appear to be extremely high. We met a number of fathers with young infants who told us the mother had died in childbirth of hemorrhage. Two widowed fathers we met had twins to take care of following the mother's death. There appeared to be a large number of twins in some of the villages visited.

Summary of the questionnaire's findings

Women in Tsum valley deliver at home, with assistance from members of their family including the husband or alone. Causes of maternal mortality were obstructed labour, hemorrhage and infection. Following childbirth the risk was from either hemorrhage or infection.

For most people there is no medical support without lengthy travel. If complications arise the only resource is the TTM doctors at the Nyile clinic or the government health post in Chokang none of whom are trained to identify and deal with serious complications of pregnancy or childbirth.

Emergency hospital care is many days of travel away. Mother's requiring an emergency cesarean for obstructed labour would almost certainly die along with the baby.

[4] Lieberman M.M.D. Tibet Vision Project. Eye care proposal. May 2001

Anemia

Women receive no iron supplementation during pregnancy. Many women complained of feeling dizzy and weak. They had skin pallor and on examination the eye mucosa or palms of the hands was pale indicating anemia.

In pregnancy anemia causes fatigue, anorexia, shortness of breath and fast pulse (tachycardia) and swelling of the hands and legs (oedema). The causes of anemia include heavy menstrual bleeding, previous pregnancies and poor nutrition, which result in many women entering pregnancy with low iron stores, while during pregnancy and lactation the body's requirement of iron increases. Iodine deficiency also reduces the utilization of iron and contributes to anemia in pregnancy.

Death from hemorrhage is more likely when a woman is anemic because the oxygen carrying capacity of her blood is compromised leaving her body unable to handle even a moderate blood loss. A woman can die in 20 minutes of a post partum hemorrhage.

Anemic women are less productive economically due to increased tiredness.

Babies are born with a six month supply of iron from the mother, anemia results if the newborn has insufficient iron stores, this results in a slow rate of mental development and a less active child.

Comment

There is a high rate of both maternal and infant mortality with many women suffering from complications of pregnancy and delivery that are, if caught early, entirely preventable. The complete absence of ante natal care means that complications such as anemia, high blood pressure, twin pregnancy, malpositioning of the fetus i.e. transverse lie, breech etc. go undetected. Early detection of potential fatal complications would enable woman to travel to Arughat or Kathmandu for delivery.

WHO state that life threatening complications occur in 15% of all births. The only factor that has been shown to reduce maternal mortality is to have a trained birth assistant present at delivery[5] who is capable of treating hemorrhage and other complications.

Recommendations

Training of existing health care workers in pregnancy and childbirth management with emphasis on life threatening complications. .
Iron tablets for all pregnant women.
Iodised salt for all pregnant women.

[5] UNICEF/WHO Facts for Life. 2002. WHO November 2004 – Skilled attendants vital to saving lives of mothers and newborns.

Mother's are usually happy to receive information on pregnancy and childbirth and nutrition.

CHILD HEALTH

Anecdotally child and infant mortality appears high. Children were said to die of fever, most likely due to diarrhoea or pneumonia. A number of people told us that in Phurfey (Phurwa) village June/July 2004, twelve children died from diarrhoea. One village said that every year during the rainy season two to three children die of fever and vomiting. Accidents are common; one village had one child die from drowning and one following a fall from a tree.

Education - while there are schools, at least in terms of buildings, the confidence of the locals in public schools is minimal, they say that teachers from other areas in Nepal that have been posted in Tsum show up only very sporadically. Classes are held irregularly, which results in a low attendance rate of children. Although we saw many school buildings they were mostly closed, except for the active Rachen nunnery school. It is estimated that up to thirty percent of Tsum pa children are sent to monastic schools in Kathmandu and the Indian Himalayas.

Summary of the questionnaire's findings

See ***Appendix 2*** for details of the answers to the Health Assessment Questionnaire.

The most common child health problems were -

i. Cough and viral colds (runny nose) were the most frequent complaint.
ii. Diarrhoea and parasitic worms, due to lack of hygiene and access to clean drinking water.
iii Ear infections, purulent drainage from the ears. Leading to deafness.
iv. Accidents. Children were seen who had broken bones and other injuries sustained in accidents.

Gastrointestinal infection

Diarrhoea -

Lack of access to clean drinking water along with unhygienic food preparation (dirty hands) is one of the leading causes of diarrhoea. Currently effective nutritional counseling and nutritional management of diarrhoea (oral rehydration) are not available to most mothers seeking care for their sick children. The government health post assistant said he teaches sugar and salt solution to the few mothers who bring their children with diarrhoea to the Chokang clinic. Frequent diarrhoea results in chronic malnutrition and stunted growth.

Parasite infestation – roundworm (ascaris)

This is the most common intestinal worm infection in the world especially in areas where there are low standard of hygiene and sanitation. Infection occurs through the ingestion of mature eggs in fecally contaminated food and drink. Children carry a more heavy infection

than adults and it results in reduced absorption of D – xylose, nitrogen and fat resulting in chronic malnutrition evident as stunted growth. The eggs have a life cycle that includes the lungs and other organs and chronic heavy infestation can lead to many serious, even fatal health problems.

Comment
Diarrhoea along with pneumonia and malnutrition are the leading contributors to mortality in children under 7 years of age in Asia.
Periodic treatment of children with worm medicine (Albendazole) has been shown to result in improved nutrition and growth.

Pneumonia
This is most likely one of the causes of childhood death.
Currently, appropriate antibiotic treatment for pneumonia is not available to mothers seeking care for their sick child.

Iodine deficiency disorders (IDD)
At least one child was seen who appeared to be suffering from severe cretinism.

Iodine deficiency in a pregnant woman affects the unborn child causing a wide variety of mental handicaps and physical deformities; the result is that the child does not develop to its full potential. This is not only a tragedy for the child but when it occurs in whole communities it is a disaster because the initiative and problem solving ability of the children who then become adults is reduced. Children have trouble coping with school and later with work so the capacity of the whole community is depressed.

Children are at the greatest risk of IDD which results in varying levels of psychomotor defects. They suffer from low IQ, apathy, attention deficit disorders along with a reduced capacity for decision making, motivation, spontaneity, creativity and initiative. Speech and hearing impairment also occur. It is estimated that children in iodine deficient areas have an IQ up to 15 points lower than children living in iodine sufficient areas.

Comment
The most critical period for adequate iodine intake is for the developing fetus after three months of pregnancy up to the third year of life. Vital brain growth occurs during this time and iodine deficiency causes irreversible damage during this period. Infants receive iodine through breast milk so if the lactating mother has sufficient stores the breast feeding child will receive most of their requirement. Iodine is vital to the physical and mental health, educational and economic well being and productivity of the community.

Iodine given to pregnant mothers has been shown to reduce early childhood mortality up to 30%. Studies have shown that school performance, attendance records, dropout rates, and several tests of psychomotor and neuromotor function are all clearly improved when mothers have adequate levels of iodine before or in early pregnancy. [6]

[6] KunDe Foundation on behalf of UNICEF. A qualitative study of socio-cultural factors affecting demand for iodised

Vitamin A deficiency

We saw no evidence of vitamin A deficiency although we did not question families about this. Vitamin A is found in fat (butter) and some dark green leafy vegetables. Lack of vitamin A causes night blindness leading eventually to irreversible blindness; it also causes a higher risk of mortality from measles. The Chokang government health post health assistant said he distributes vitamin A capsules twice a year to all children aged 9 months to 6 years. Villages that are not close to the health post may not be covered; no villagers mentioned getting these capsules.

Immunisation

The government health post worker said they give the flowing immunisations
Tetanus DPT (requires a minimum of three injections over six months).
Polio (requires a minimum three injections or oral medicine over six months).
Measles
BCG one injection. Protects from tuberculosis up to the age of 5 years.
The village of Chokang where the health post is located had the best immunisation coverage. Effective immunization levels to control vaccine preventable diseases had not been achieved in most areas visited and families said their children had received one or two injections only. One village said that the government health post workers come once a year, but they had not so far come this year.

Recommendation

- Provide iodised salt to all pregnant women and children less than 3 years. One teaspoon per day. Instruct in proper usage, it should be added to cooked food at the end of the cooking process. Frying reduces the iodine content and the tannin in tea reduces the absorption of iodine (and iron).
  An alternative may be iodine oil capsules. These were distributed in Nepal in the past but are no longer available.
- Access to clean drinking water.
- Worm medicine for all children.
- Training of health workers in treatment of diarrhoea with increased fluids and appropriate antibiotics for dysentery (bloody diarrhoea).
- Training health workers in recognition and treatment of pneumonia with access to appropriate antibiotic treatment
- Families. Hygiene training, nutrition information.

Malnutrition

Although the children were not weighed or measured a significant number appeared to be either very small for their age (stunted growth) or underweight. These are both indicators

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salt in Tibet. March 2005.

of chronic malnutrition due to a long term food deficit or a long term micronutrient deficit (iodine, iron). In Tsum climatic conditions mean that the growing season is relatively short and the altitude also impacts what foodstuffs can be successfully grown.

Children who are chronically malnourished are more susceptible to infections, they will find it harder to concentrate and therefore do less well at school. When they are older, they will be less strong and therefore economically will be less successful as they will not be able to work as hard as fitter people. Girls may have increased difficulties during pregnancy and childbirth.

Malnutrition commonly results from early weaning practices. The child consumes less breast milk once solid food is introduced, while unhygienic methods of food preparation result in frequent bouts of diarrhoea and/or worm infestation. As they get older malnutrition is due to the child either not receiving enough food or not receiving enough of the right kinds of food. Mothers need to return to work in the fields and young children are most likely left with grandparents or other carers and it is likely that many infants are not fed often enough.

A high proportion of the energy in the diet is provided by tsampa (barley flour) mixed with tea. This is the traditional food of both Tibetans and the Tsumpa; although tsampa is nutritious other foods are also required by the growing child.

Previous concerns expressed by scientists that the altitude affected the growth of children and could be a reason for chronic malnutrition are now thought to be invalid and that malnutrition is in fact caused by other factors.

Breastfeeding and weaning –

Babies are put to the breast at birth; however it is common practice to introduce soft food tsampa (barley flour) mixed with butter and tea from the first days of life. Cow's milk may be introduced after one month. This lack of exclusive breastfeeding due to early introduction of other foods is widespread. Mothers complained of not having sufficient milk although once solid food is introduced milk production decreases due to supply and demand. Mothers did however maintain breastfeeding for long periods, up to two years.

WHO recommends that all women should be enabled to practice exclusive breastfeeding and all infants should be fed exclusively on breast milk form birth to six months of age. Thereafter, children should continue to be breastfed while receiving appropriate and adequate complimentary foods for up to two years of age and beyond.[7]

Exclusive breastfeeding for at least the first four months of life is an important practice for child health, it prevents malnutrition, it protects against gastrointestinal infection, urinary tract, ear and lung infections in infancy and reduces the incidence of asthma. 90% of brain growth is completed by the age of three years so adequate nutrition is essential during this time.

[7] The World Health Assembly (Resolution 47.5, 1994)

Recommendations. [8]
The Tsum health survey did not go into any detail regarding the diets of children.

- Iodised salt as soon as solid food is introduced and until 3 years of age.
- The need for the mother, as far as possible, to exclusively breastfeed for at least 4 complete months and then to add complementary foods.
- Training essential people to understand the need for exclusive breast feeding. Hygienic food preparation. Clean drinking water. Adequate frequency of feeding and the need for a varied diet .Essential people includes health workers, teachers so that they can then educate children (and parents) within the schools as part of their normal curriculum, grandmothers (in addition to mothers) as key care takers while the mother is working.
- The needs for a variety of complementary foods to be added – not just tsampa so that a child is taking a full diet by the time the child is one year old.
- The need for young children to eat more regularly – children under 4 years of age should be eating at least 5 times a day.
- The importance of "regular" nutritious snacks, such as dried cheese, fruit, seeds, beans etc. that are a good source of many micronutrients. Emphasising these as an important part of the diet that should be encouraged.

b. To visit and assess existing health care workers and facilities.

Hospitalisation
Emergency hospital care is three to four days walk away in Arughat the Gorkha District headquarters. Surgical care is only available in Kathmandu nine days travel, four days in winter when the bus service operates from Arughat. An alternative for families who can afford it is across the border at the Dzongkar County hospital in Kyirong two to three days by horse over a high mountain pass. It was not clear whether or not surgery is available here.

1. Government Health Posts in Tsum

There is a government Health Post in Upper Tsum, based in Chokang village and another Health Post in Tsumche, the last village in Lower Tsum. In Lower Tsum the hamlets are

[8] Save the Children UK. Nutrition Survey Report. Tibet. December 2001

very spread out and it is difficult for patients to get to the Health Post. Our visit was only to upper Tsum.

Government Health Post Chokang
See ***Appendix 2*** for details of the interview.

There are 4 health assistants working in the Health Post. They are from Gorkha District.
The senior one received a fifteen month training; he is currently in the Gorkha District headquarters receiving additional training. He has been at this Post for 16 years. The other three have little or no training. Two of them are presently out of station. The interviewee goes to Philim, below Lower Tsum, tomorrow to collect vaccines so there will be no one manning the Health Post while he is away.

The Health Assistants live in a house about a 20 minute walk from the Health Post building. They have no set opening hours, it is "according to the needs of the people". Therefore people arriving at the Health Post from far off villages will usually find it closed. A few people interviewed said they went to the Health Post and it was closed, one women with tooth pain said she made four visits and it was always closed. The Chokang villagers know where the Health Assistants live and go directly to the house for care and the Health Assistant said they often deliver medicine to the houses and visit sick people in their homes.

The Health Assistant was friendly; he had been here for six years. He had never received any type of health training and admitted to not being able to diagnose and treat illnesses. The Health Post carried basic medicines, Tetracycline eye ointment, Metronidazole for giardia and amoebic diarrhoea, Digene for indigestion, Paracetamol and Brufen for pain and fever. A few antibiotics.

Treatment is free and they see between zero and seven patients a day.
Iodised Salt – unavailable, "it is not sent by the government to this area".

Immunisations -
The Health Assistant showed us the vaccine vials, they were not expired and included Tetanus, DPT (Diphtheria, Pertussis, Tetanus), Polio, Measles and BCG.

Vitamin A capsule distribution twice a year with the assistance of a local person. All children from 9 months to 6 years.

It appeared that only the people living in Chokang village really benefited from the Health Post's services.

2. Tibetan Traditional Medicine (TTM) Clinic in Nylie
See ***Appendix 2*** for details of the interview.

The ‘Tsum Shenpen – Ayurvedic Clinic’ is located next to the river below the village of Nyile. One hours walk from Rachen Nunnery and 2 ½ hours walk from Mu gompa. It is staffed by two nuns who received TTM training for five and half years in Kathmandu. Tsering Dolma is from Nyile and Kunsang is from Lower Tsum.

They see from 4 to 30 patients per day and diagnose by pulse and urine.
They charge 2 to 3 rupees per pill, but not more than a total of fifteen rupees per day. They charge less for poor people. The clinic is very clean with a large selection of Tibetan medicine arranged neatly on shelves in jars. They also have some Allopathic pain medicine (Paracetamol) and some eye drops. They have no Allopathic (western) medicine training. The clinic was set up by Lama Sherab Rinpoche who is the abbot of the monastery located on the hill above the clinic and also a number of other smaller gompas' in Tsum valley. The clinic receives funding from the American based organisation SEEDS.

3. Rachen Nunnery –
The teacher Mr. Samten Dorje, who has no medical training, is in charge of dispensing western medicines to the sangha and villagers. These are purchased and sent to the nunnery by Kopan monastery in Kathmandu. The medicines include pain killers, cough syrup, medicine for gastritis, antibiotic cream and eye drops.

Comment
There is access to Tibetan Traditional Medicine at the Nyile clinic, within a few hours walk for most people. Access to allopathic (western) medicine is woefully inadequate.

c. To provide medicines for the treatment of acute illnesses.

The Health Advisor carried a large quantity of basic medicines, knowing that once people heard that a health survey was being conducted they would arrive with various ailments requesting treatment for themselves and their families.

Rachen nunnery -
Since the first day of Sakadawa (May 23rd) many villagers were coming daily to the nunnery to recite one thousand bum (one billion) Om Mani mantras. This takes around one month and was completed while the health team was visiting. Each day many sick people came to the courtyard to be seen. While walking north to Mu gompa and then south to Chokang village we stopped in villages en route to interview people and to see any sick people.

Hygiene talks were given to all the nuns at Rachen nunnery and all the monks at Mu monastery. Tooth brushes and paste and soap were distributed to all the sangha.

Worm medicine.
150 doses or worm medicine (Albendazole 100mg twice) were distributed to all the sangha and to children with gastrointestinal problems.

Pregnant women

Iodised salt, one kilogram was given to all pregnant women.
Iron tablets, with vitamins to all pregnant women and any women who appeared anemic.

Children
Multivitamin drops with iron were given to all young children who had an illness, or appeared malnourished.

Appendix 3 - Medicine list
Appendix 4 - Record of illnesses and people seen.
Appendix 5 - Health and Hygiene talk

d. To identify future health care workers who can be trained.

Training people to be health care workers in allopathic medicine is necessary. This training should be tailored to fit the needs of the Tsum pa community. Focus needs to be on diagnosis and treatment of life threatening illness, management of hypertension. Diagnosis and treatment of childhood illnesses, nutrition. Pregnancy and childbirth training that includes pre natal care, iron supplementation and nutrition, clean delivery, treatment of obstetric emergencies. Dental extraction. They should also be able to pass on information about on hygiene, nutrition etc. to the local people. The health workers need to be supplied with basic medical equipment - blood pressure cuff, stethoscope, otoscope (for ear examination) teeth extraction tools, obstetric delivery instruments, pressure cooker sterilizer. Plus essential medicines, iodised salt, iron tablets.

Existing health care workers

1. Tsering Dolma and Kunsang the two nuns who are traditional doctors who work at the Tibetan Traditional Medicine Clinic in Nylie.

During the team's visit to the Nyile clinic and subsequent meeting with one of the nuns at Rachen nunnery both nuns expressed interest in studying allopathic medicine. They will be in Kathmandu in November 2005 for their annual holiday and they could do a training course at this time. They are working under Lama Sherab Rinpoche and his permission would have to be sought.

If this option is pursued the nuns would make a commitment to see the ordained sangha and villagers at Rachen nunnery on a regular basis.

2. Dolkar a nun who studied TTM at Shekar monastery in Kathmandu for five years. She is Tibetan and went to Rachen Nunnery after this visit, in August 2005. She is based at the nunnery and prescribing traditional medicine for the nuns and villagers.

3. A nun from Rachen Nunnery is presently in Darjeeling studying TTM. She was sent by Drukpa Rinpoche and should complete her training next year after which she will return to Tsum to work.

Other options –
1. Mr. Samten Dorje the Rachen school teacher is already dispensing western medicine to sick people. Arranging a health training for him in Kathmandu should be considered.

2. Mu Monastery school teacher – a young lay man. He worked previously in a health clinic but has no health training.

3. Identify two local people who have the interest, intelligence and initiative to undergo a health training program in Kathmandu especially Maternal Child Health.

4. Hygiene, nutrition and Maternal Child Health training for the general population.

Recommendations
Identify a suitable two month health training in Kathmandu.

f. To make a proposal for the next step.

Immediate – Tilganga Eye Centre have agreed to conduct an eye camp for cataract patients in spring 2006. Two ophthalmic technicians traveled to Tsum valley in September for ten days and registered 57 cataract patients.

Priority Health Needs -
Health Clinic
Rachen Nunnery is located at the Southern end of the Upper Tsum valley. Due to logistics and the construction work that is already taking place it is the preferred site for a health clinic building. Construction has been almost completed on the dining room, kitchen and class rooms, next year the accommodation will be upgraded, replaced or repaired.
Construction of a clinic should be planned. This along with an appropriately trained allopathic health worker and medicine would serve the local communities.

Rachen Nunnery and Mu Monastery

- Latrines – there are no latrines at Rachen nunnery. One at Mu monastery is rarely used.
- Drinking water –water pipes have been laid providing clean running water from the mountain side directly to both the nunnery and monastery. The pipes freeze in winter. Rachen nunnery pipe freezes for 5 months a year leaving the nuns to go down to the river and collect water running underneath the frozen river water. This is slippery and dangerous and the river water is contaminated. The pipes need to be buried deeply so that the water does not freeze.
- Smokeless stove in the nunnery and monastery kitchens. Chinese stoves available across the border.
- Reading glasses for everyone over 40 years old who needs them for reading Tibetan scriptures.
- Liniment for elderly people's joints.

To improve the long term health status of the Tsum valley inhabitants –

- Iodised salt to every pregnant woman and child under three years,
- Worm medicine for all children
- Iron tablets for all pregnant women.
- Access to clean piped drinking water
- Smokeless stoves. Eye irritation and upper respiratory problems are caused by the smoke filled houses; this is especially unhealthy for children. A few houses had smokeless stoves, however people said the wood of the roof is protected from insect damage by the black tar from the smoke. They would need to use a protective varnish for the roof if changing to a smokeless stove.
- Health education for householders.

3. Conclusion

Tsum lies in a forgotten corner of this Himalayan kingdom where no state services function, amidst a Maoist conflict that has only served to further isolate an already neglected population. Tsum has always been out of reach of the Central Government and it will be many years before this changes.

The ***GLK Himalayan Sangha Project*** is committed to raising funds to help improve the health and education status of not only the sangha at Rachen and Mu but also all the inhabitants of this sacred valley. This is not a sustainable project; every year funds will be needed for medicines, salaries and infrastructure maintenance. With all of this there is every reason to hope that the Tsumpa and their Buddhist practice can continue to thrive.

Kathmandu
August 2005

Appendix 1 - Health Assessment Questionnaire

Name
Date
Area name
Demographics

How many people in your village _
Male/female _____
Age range_____
Children_____

How far to the School
What age do children attend

Water source – where does the drinking water come from

Food scarcity
Is there any shortage of food during the year
Wild foods
Meat when eaten
Livestock

Health Clinic
How far by walking
Who works there

When is it open

What medications do they have

When do you visit this clinic for what reason

Where do people go who need hospitalisation/ surgery

Is there any traditional medicine available

Health Adults
What are the most serious, life threatening health problems you face.

What are the most common illnesses

Do they vary depending on the time or year

Incidence of cataract

Children
When are they put to the breast
When are they weaned

What are the most common illnesses amongst children.

How many children die before the age of 5 years
How many have died in the past 5 years in your area
What illnesses do they die from
Pneumonia Measles Diarrhea

Boy or girl
What season

Are children immunised

Is diarrhea a problem
Pneumonia

Pregnancy
What care do pregnant women receive

How many die in childbirth or soon after
In the past 5 years

Why do they die

Goitre Cretinism
Can you get iodised salt
Do many people have big neck (goiter) disease

Are there many retarded children in your village

End

Appendix 2 - Results of each Health Assessment Questionnaire

If you are interested in the Results of each Health Assessment Questionnaire, please contact Ani Fran (kopan@ecomail.com.np).

Appendix 3 - Medicine list

Adult medicine

Cipro eye drops	**40 bottles.**
Ciprofloxacin 500 mg	**100 tabs**
Azithromycin 500mg	**30 strips of 3 tabs**
Cephlexin 500mg (10 doses)	**200 tabs**
Amlodipine 5mg for blood pressure	**one box**
Fungal cream	**10 tubes**
Cortisone cream	**10 tubes**
Tiniba 500mg	**50 tabs**
Paracetamol	**500 tabs**
Mupuricin anti bacterial ointment	**30 tubes**
Ferrous Fumarate 300mg & Folic acid	**2000 caps**
Albendazole 400mg	**300 tabs**
Iodised salt	

Pediatric medicine

Cetamol	**15 bottles**
Azithro susp 100mg	**30 bottles**
Cephlexin 125mg/5ml (3 bottles 1 course)	**45 bottle**
Scabex	**6 bottles**
Multivitamin and iron	**50 bottles**

Dettol soap	**50 bars**
Dressings 4x4	**100 pieces**
Bandage 3ins wide.	**100 pieces**
Tape ½ ins	**15 rolls**
Iodine	

Appendix 4 - Record of illnesses and people seen.

June 9th to 19th 2005
The majority of people were seen in the late afternoon at Rachen nunnery where we set up a temporary clinic.

The details of a number of people were not recorded as they were seen on the trail while we were walking.
On the last day no patient details were recorded.

The breakdown of people seen and recorded -
Nuns 15
Monks 5
Female 49
Male 19
Children 23
Total 111

Day 1
Rachen nunnery clinic in courtyard
Nun 40 years headache
M. Both eyes Intra Ocular Lens for cataracts at Tilganga Eye Hospital in Kathmandu.
Problem now with one eye.
F. 69 years. Cataract. Knee pain.
F. 52 years. Goitre. Knee pain.
M. Nunnery construction worker. Large abscess on sole of foot. Antibiotics given.

Lar village
Twins – 4 months old. Father brings them. Mother died in childbirth. Vitamins.

Day 2
Rachen nunnery clinic in courtyard
Nun – Ani Yeshe. High blood pressure. Taking hypertensive medication prescribed
In Kathmandu last winter. Needs more.
Nun – Ani Chodon. High blood pressure. Taking hypertensive medication prescribed
In Kathmandu last winter. Needs more.
M. 2 ½ years. Purulent drainage from ear. Antibiotic given.
F. Eyes burning
M. Head wound from fall.
F. Ankle injury – today. Fracture or dislocation.

F. Eye problem ? cataract
M. Eye problem.
Child. Vomiting. Worms.
F. worms
Child. fell down two days ago. No serious injury.
F. Eye irritation. Cannot see close up. Vomiting and gastritis for three years.
F. Diarrhoea
F. Request to visit lady in the village with fever and two month old baby
F. 85 years eye problem. Anemia.

Day 3
Walk to Mu Monastery.

F. Dog bite. Antibiotic given. Eye infection.
2 year old. Worms
F. Back pain. Delivered a baby two months ago. Carrying heavy loads.
M. Old injury, dislocation or fracture of ankle.

Chule and Nyile villages on way to Mu monastery
F. 62 years. Diarrhoea. Eye irritation.
M. Eye irritation.
F. Pregnant.
F. Shoulder pain. Carrying heavy loads.
F. Cataract
F. Swelling of body. Strong smell of alcohol. Yellow face.
F. Cough.
F. 32 years. Goitre. Holding 4 month old who appears to have cretinism.
F. High fever for one month
M. Eye pain.
M. Cough for 2 months.
M. Back pain.
Child. Impetigo infection of face.
F. 6 months pregnant.
M. 11 years. Stomach pain.
F. Fell down. Pain in hip.
F. Burning stomach pain

Day 4
Mu Monastery. Return to Rachen Nunnery.

Mu gompa
Geshe la. skin dermatitis from irritation.
Monk, recovered from Tuberculosis treatment. Feeling weak.
Monk, taking gastritis medicine given in Kathmandu. Needs more.
Monk 7years. Ear infection.
Monk, chant master - one month coughing with blood. Respiratory infection.

Rash on body, contact dermatitis.
Monastery cook, migraines since childhood. Cough 5 years. High blood pressure.

Villages
2 month old, weak
M. 3 years, fell and small cuts on head.
F. Anemia. Five children including a 13 day old baby.
M. Cataract. Worms.
F. 57 years. Tooth pain.
Child. Worms.
F. Headache
F. Tooth pain

Day 5
Rachen Nunnery clinic in courtyard
Nun, no appetite.
Nun, needs reading glasses
Nun, back pain
Nun, 73 years. Dizzy. High blood pressure. Dispense hypertensive medication.
Nun, 46 years high blood pressure.
Nun, 11 years, ear infection
Nun, cook. Migraine.
Nun, burning eyes.
M. Follow up nunnery construction worker. Large abscess on sole of foot draining pus.
M. Nunnery construction worker. Herpes simplex blisters on lips.
F. Fever. Delivered baby 2 months ago. Uterus non tender. Antibiotics given.
F. Chicken bite on face.
9 month old with diarrhoea.
F. Pregnant 7 months, heart burn.
F. Left eye terrigian growth.
F. Left eye tearing, duct swollen.
Child. Worms
F. Diarrhoea for 9 days.
F. Left eye blurred vision. Diarrhoea for 2 months.
2 year old diarrhoea.
M. Stomach pain, gastritis.
F. 80 years. Weak.
F. child. Worms.
F. Weak, anemia.
F. Weak, anemia.
M. 11 years. Wound infection on scalp.
M. Worms.

F. Burning eyes.
2 month old. Diarrhoea.

Day 6
Chokang village. Ven. Tenzin Zopa's house.
Ven. Chodak's sister. Possible kidney infection.
Ven. Tenzin Zopa's sister-in-law. Anemia. One week old baby.
Ven.Tenzin Zopa's mother, high blood pressure.
F. Elderly. Both eyes cataract.
M. 3 years. Not speaking. Deaf.
F. knee pain.
M. 10 years. Diarrhoea.
F. 70 years. Gastritis.
M. 60 years. Gastritis.
F. 2 months pregnant. Dizzy.
M. 27 years. Cough with blood. Porter from Lower Tsum. Go to Arughat for Tuberculosis check. Give antibiotic.
M. Skin rash.

Day 7
Return to Rachen Nunnery.

Nagchu (Nakyu) village
M. 11 years. Tsering Gyurme, hit by falling rock on April 24th. Unable to walk. Fractured right femur. Father name Tsering Purba.

Day 8
Rachen Nunnery
Nun, migraine.
Nun, stomach pain.
Nun, high blood pressure.
Nun. High blood pressure. Taking hypertensive medication from Kathmandu.
F. 3 years. Not eating.
F. Cough and fever for one month. Chest pain. Antibiotic given.
F. Dizzy

Day 9
Rachen Nunnery
F. 49 years. Hot sweats, ? menopause. Migraine.
M. Child ear infection.
Child, not eating, very thin.
F. Eye irritation.
F. Hoarse voice. Early goiter.

Day 10

Rachen Nunnery
No record.
End.

Appendix 5 - Health and Hygiene talk

Talk given by Frances Howland and Ven. Chodak at Mu Monastery and Rachen Nunnery to all the sangha.

Feces
Many diseases are spread by feces (chabsang).
This includes every type of diarrhoeal disease, worms, typhoid, jaundice (infectious hepatitis)

One person gets this illness and spreads it to other people through their infected feces that contaminates drinking water sources or food.

- Wash hands after toilet
- Wash hands before eating
- Never defecate near or in a river or near any water supply that other people may drink.
- Use a toilet for feces. Cover the feces with ashes or leaves or dirt.

Flies
Flies spread disease. They land on feces and then on your food.
They carry invisible germs from the feces on their sticky feet.

- Do not let flies land on your food or your face.
- Cover food to prevent flies landing on it.
- Cover feces to prevent flies landing.

Washing
Wash face daily with soap. This will help to prevent eye infections.
To prevent skin infections.

Brush teeth daily. Prevents painful gums and tooth pain in the future.

Garbage
Throw garbage away in a designated area.
Never throw garbage near a river or water supply.
Bury or burn garbage to prevent flies from landing on it and animals from eating it.

Spitting
Never spit. It spreads tuberculosis and many other respiratory diseases.

End.