Final Report

Review of Integrated Health Camp for Bumbure/Bupsa villages, Solukhumbu District

Supported by Moving Mountain Trust, UK

Implemented by Moving Mountain Trust, Nepal and Adventure Alternatives, Nepal

Submitted To

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By

Dr Binod Aryal, MD

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Acknowledgement

On the behalf of all the people in Bumbure and Bupsa and on the behalf of the country of Nepal I would like to express my sincere gratitude to all the volunteers from Bristol University, UK who came to Bumbure and Bupsa spending their valuable time and resource to help the people of Bumbure and surrounding villages. This would not have been possible without the relentless effort of the project manager Mr. Gavin in coordinating the whole project and in raising the necessary funds. This also would not have been possible without the wholehearted determination of all the other team members.

Mr. Ang Chongba Sherpa, chairman of Moving Mountains Nepal deserves special thanks as he is one of the few who have looked back to the place where they have come from and have tried to help the less privileged fellow beings.

On the behalf of the Moving Mountain Trust, I would like to extend my earnest gratefulness to the people of Bumbure, Bupsa and around who have given us an opportunity to come to their place and be a part of their culture and family. We were genuinely affected by their respect, cheerfulness, endurance and their ability to conceal the hardships of life with a smile. We learned a lot from them.

On the behalf of Moving Mountain Trust, I would like to thank officials of Ministry of Health, Government of Nepal who allowed us to pursue our objectives in the village of Bumbure.

Binod Aryal
Moving Mountains Trust
Nepal

Preface

Before going into the details of the report, I would like to put into perspective of the culture of medical clinics in Nepal.

It is a common practice in Nepal to conduct medical clinics in the villages.

Health care is largely inaccessible to most Nepalese in rural Nepal. If one goes through the structure of the health care delivery system of Nepal, it is actually very impressive. The smallest units of the system are the sub health posts, one for each village development committee (VDC). Then there is a health post for each electoral area. The sub health posts and the health posts are run by paramedics. In the next tire is the district hospital where there is a medical doctor. There is also a district public health office to look after the statistics and the preventive aspects of medicine. Then it goes on to the zonal hospitals and then to the big sophisticated hospitals in the major cities including the teaching hospitals. The level of care to be provided is also specified for each units of the health care delivery system. The government provides certain medications and other supplies for each of these units, many of which are free for the patients. For e.g. iron tablets are free and so are some antibiotics like cotrimoxazole. Honestly, when I came to know this for the first time, I was very impressed. It is a perfect plan but only if works.

There are few very important factors as to why the health care delivery in Nepal is in the present situation. One is the geography. It is scenic to the eyes but it is a tough deal for those who dwell here. Let me cite an example. Suppose somebody has pain abdomen. Let's say that person has to be carried to the health post. It will take a few hours to gather people for carrying the patient in a relay fashion in an improvised stretcher through the hilly terrain and possibly in the dark. And even if everything goes well, the health post could be at a day's walking distance. If that person had acute appendicitis or perforated duodenal ulcer, he certainly would be beyond revival when he would finally be at the footsteps of the health post. Nobody would do that kind of surgery in a health post anyway. Then he will have to be carried to the nearest road to be transported in a vehicle in one of the fair weather roads of Nepal. What about the cost factor? Well, the story goes on.

Education and awareness is another major problem in Nepal. On the other hand, maybe less than half of all the intended supplies reach the health posts or the sub health posts. Many of the times, they don't even have some intravenous catheters for intravenous fluids which are supposed to be life saving in a country like ours where diarrhea is a major killer disease.

Medical camps have been our culture for a long time. Previously, medical clinics or 'camps' were mostly limited to the government sponsored 'vasectomy, 'tubal ligation' and vaccination clinics in the remote villages. There are many nongovernmental organizations (NGOs) registered in Nepal. These NGOs could be anything from Red Cross to a small local youth club. Many of these NGOs have incorporated health issues in their objectives. To address their health

care objectives, these NGOs conduct some health camps locally in their areas. Some of the health camps could be very sophisticated like ENT surgeries but most of them would be general medical clinics where they hire a doctor or two to consult the walks in patients. The villagers are generally very excited about health camps. In many places, these camps are the only occasions when the villagers see a doctor or that the health care is the closest to where they live. They generally have large show up rates in these clinics. These camps are almost always free and generally they have free medicines to distribute. At the end of the camp, the villagers are very thankful and the organizers return with a sense of satisfaction. It may not be of long term benefit but these camps do help screen villagers and in creating some awareness. Generally they conduct these clinics in a season when the villagers are not very busy in the fields.

A lot have changed in the recent past. After the dawn of democracy in 1990, the numbers of NGOs and private hospitals have increased significantly. An apparent rise in the level of political awareness was also felt in Nepal around that time basically because of a lot of private newspapers and free politics in the country. The frequency of free medical camps in rural Nepal also increased accordingly. However, many of these camps had no clear vision and objectives and many had hidden agenda including political interests. These clinics were not based on facts of perceived needs and real needs of the villagers.

The general thinking of the lay people also have changed with time. After witnessing some of the camps, many people feel that their problems will not be fixed with that visit. So rather than concentrating on relating their real problems, they simply are in a lookout for securing some of the free medicines. Pills are invaluable to them. They come up with all the different complains possible thinking that the more problems you have, the more medicines you will get. That left the health care providers frustrated and it is somewhat a vicious cycle which keeps the provider as well as the consumer from sticking to the primary objective of the whole campaign in the first place.

As a consequence, the popularity and validity of the so called free medical clinics have gone down and these days' people look at it cynically. Nevertheless, there are some who are genuinely interested in helping the underprivileged.

Coming back to the health status of Bumbure or the Everest region in general, when Sir Edmund Hillary trekked in this region in the 1950s, there were no health care facilities at all. Houses were dark with minimal ventilation and Tuberculosis was rampant. The first effective health facility started with the initiative of Sir Edmund Hillary. There are several good health care facilities around this region these days. The hospitals in Kunde, Lukla and Phaplu are well organized, efficient and effective. The region also enjoys the seasonal high altitude aid post in Pheriche, a Kathmandu University outreach clinic (a health post) in Kharikhola and a dental clinic in Namche Bazaar.

All of these facilities are backed up by foreign aids. However these centers are so spaced out (except Kathmandu University outreach clinic in Kharikhola) that the primary problem of access

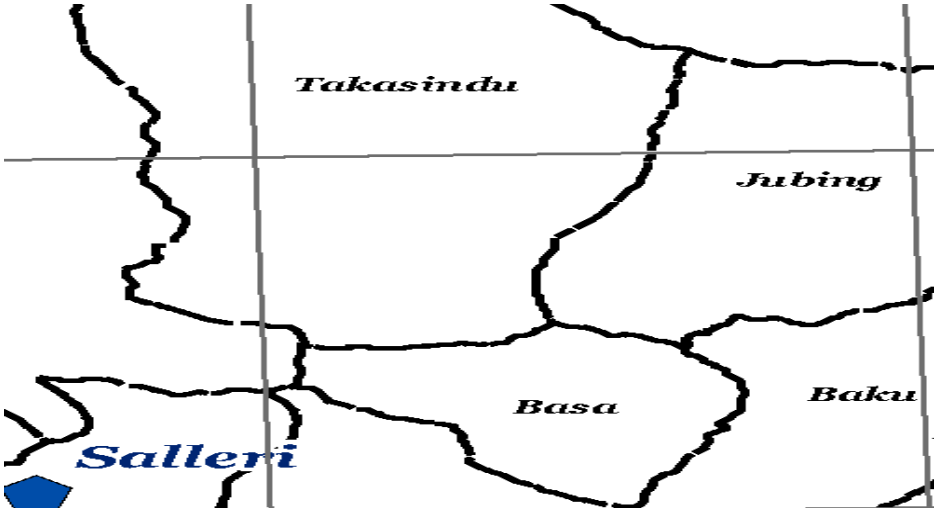
is still the biggest hurdle. People who can afford can easily call in a helicopter to fly them out to Kathmandu (the capital of Nepal). But for many, it is a dream come true. Solution to the problem? We could use cable cars or roads. But that is not going to happen for at least coming 30 years. Another solution would be to make 'primary health care' available to most villagers in their locality with smaller aid posts and make good arrangements for referral and transportation. This actually could be feasible and will be a good solution to the problem. Health camps then could bring in specialty care from time to time. For example, eye clinics, gynecology clinics, surgical clinics etc depending upon the need of the population. That would provide the villagers with the basic health care and a reasonable specialty care. All the components of the primary health care needs to be activated to achieve these goals and it should be a long term commitment from all the parties involved with active participation from the public in directing the entire mission.

List of abbreviations

ANC	:	antenatal clinic
APD	:	acid peptic disorder
ASOM	:	acute suppurative otitis media
BK	:	Bishowkarma
COPD	:	chronic obstructive pulmonary disease
CSOM	:	chronic suppurative otitis media
DMPA	:	depot medroxy progesterone acetate
DOTS	:	directly observed treatment strategy
ENT	:	ear, nose and throat
H. Pylori	:	helicobactor pylori
JRA	:	juvenile rheumatoid arthritis
KAP	:	knowledge attitude and practice
KK	:	Kharikhola
NGO	:	non governmental organization
OA	:	osteoarthritis
PIVD	:	prolapsed intervertebral disc
PSS	:	progressive systemic sclerosis
RA	:	rheumatoid arthritis
TB	:	tuberculosis
TM	:	tympanic membrane
URTI	:	upper respiratory tract infection
UTI	:	urinary tract infection
VDC	:	village development committee
GP	:	General practitioner

Introduction

Bumbure along with Bupsa health camp continued this year as per the commitment of the Moving Mountain Trust. The clinic organized in Juving VDC of Solukhumbu district provided services to the people of the surrounding VDCc including Taksindu, Basa and Baku along with Juving.



Aims and objectives

The aim of the clinic was to uplift the general health status of the village of Bumbure, Bupsa and the neighboring villages.

The objectives of the clinic were

1. To provide medical and basic surgical care to the people attending the health camp.
2. To provide dental services to the people attending the camp.
3. To provide health education and create health awareness in the general public on basic issues namely personal hygiene, nutrition, smoking, alcohol and birth control.
4. To collect data on population distribution, disease pattern, disease burden and felt needs of the people of Bumbure and nearby villages.

Structure of the medical clinic 2011

The teachers and the students from the local school helped with translation, general management of the clinic, crowd control, registration and errand running.

A local CMA of the Kharikhola Health Post helped the team whole heartedly.

There were two Nepalese doctors (both MD), 2 nurses and a dentist.

The team was well supported by Bristol Medical and Dental Students.

Money

The funds for medicines and other supplies were covered by the donations collected by the Moving Mountain Trust, UK.

All Bristol University medical and dental students were volunteers.

The costs for transportation of the goods from Kathmandu to Bumbure and Buksa were born by Moving Mountain Trust and adventure Alternatives Pvt. Ltd.

Materials

Some of the dental instruments were borrowed from a hospital in Kathmandu.

Rest of the supplies including Medical, surgical and Dental was bought in Kathmandu.

Logistics were managed by Adventure Alternatives Pvt. Ltd.

Itinerary

It was a pre planned 10 day clinic. The itinerary was posted well in advance on the website.

The clinic

After a warm welcome by the villagers, we started to set up the first clinic in Bupsa in a Monastery which ran for five days. We moved to Bumbure on the fifth day evening and set up clinic in a Local school next morning. All the barrels full of supplies were taken to the clinic and we arranged all the rooms and the pharmacy. The clinic hours were from 8 am to 5 pm. However we stayed longer hours when it was necessary in certain situations. We had one hour lunch break in the middle of the day and had tea sessions during work.

People were seen on first come first serve basis unless it was an emergency.

People were triaged after registration and sent to the respective rooms (Gynecology/Obstetric, general medical/surgical or dental) for consultations. They came out with the prescriptions and lined up in the pharmacy for medicines. After they got their prescriptions filled, they left the clinic.

Surgeries and procedures were performed on the spot as people presented.

People thronged the place in huge numbers. Teachers and students of the local school helped with crowd control. More than 150 patients were consulted every day. Many of them were seen by all the teams as they all had dental and general medical problems.

People had access to drinking water and rest rooms while they awaited their turn in the clinic. Few small restaurants were opened by the locals to provide food and snacks for the people.

People had heard of the clinic months before we arrived, through word of mouth, small pamphlets and local FMradio.

The statistics

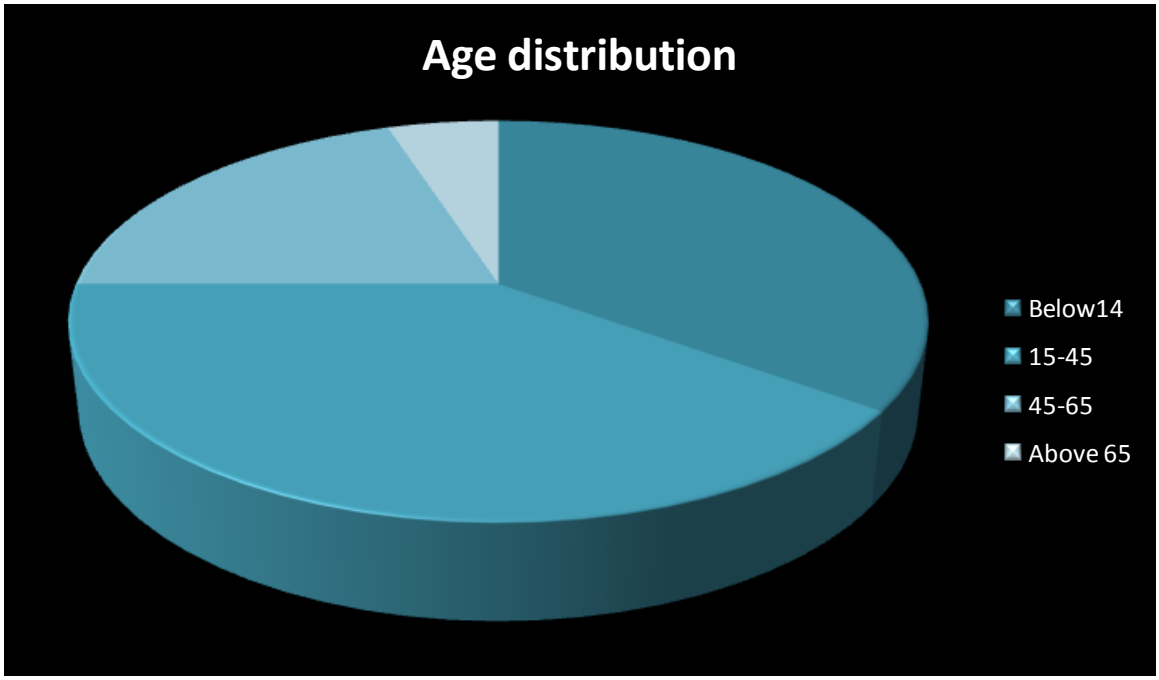
Total Participants

A total of 1750 people were served during the 10 days clinic in Buksa and Bumbure.

More females (60.88%) attended the clinic than males (39.12%).

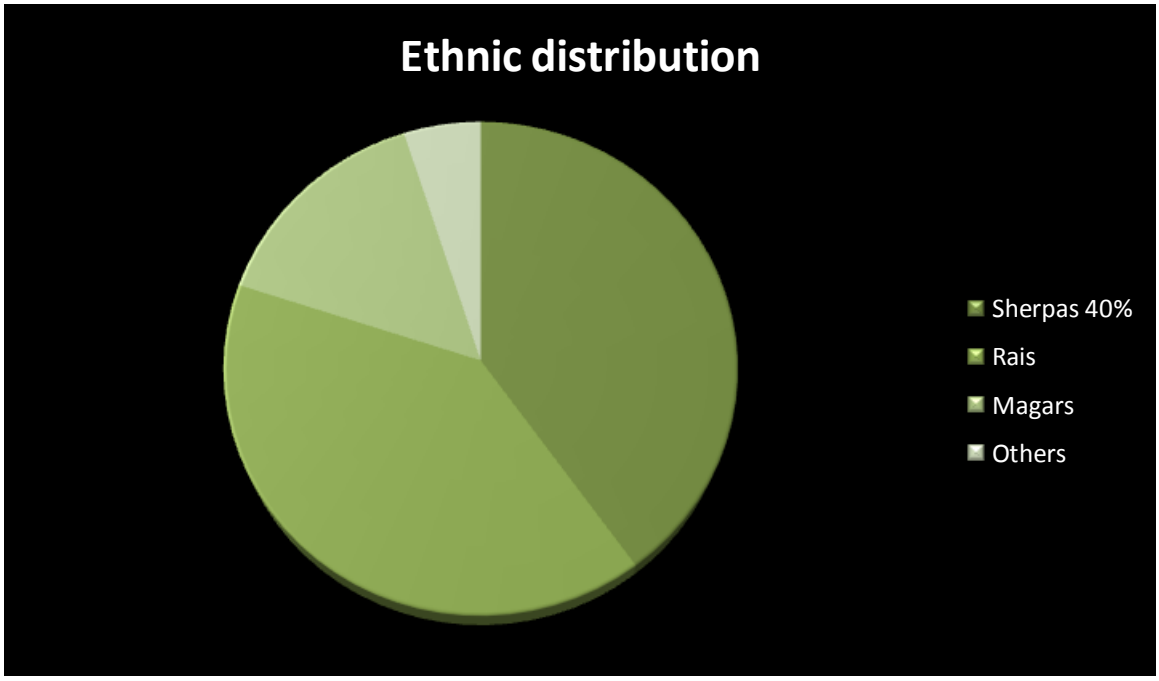
Age Distribution

The age distribution is typical of our population pyramid. Most of the kids could attend the clinic because they were brought by their parents. A lot of the younger population came in for a simple check up. The elderly population had problems walking long distances to reach the clinic. Thus, most of the elderly patients we saw were from the immediate neighborhood of the hospital.



Ethnic Distribution

Nepal is known for its cultural diversity. This is one country where people of different culture and religion have lived closely in perfect harmony. However, the cast system prevalent in Nepal has often been criticized. People in Nepal have been divided into four casts. *Brahmins, Kshetria, Baisya and Sudra*. Some of the casts claim to be of higher stature than the others. There was a time when some particular groups of people in the lower cast were considered to be untouchables by the people of higher cast. In fact, this still happens not infrequently in some parts of Nepal. In Bubbure and the villages around, Sherpa and Rai are regarded as higher in the cast system followed by Magar, Tamang and BK.



The ethnic distribution of our clinic is a representative sample of the proportion of the ethnic distribution in the community. Cast system is a big issue these days in Nepal. It often is a part of political commitment in the political parties and many NGOs claim to be working for the lower caste population. Laws are being made to have at least one representative from the lower caste in all sectors and there are various scholarship programs for the lower caste students. There are awareness commercials all the time in the TV and hopefully this caste system will be history in the near future.

If one looks back at the history of the caste system, it actually was a division of labor in the early days. For e.g. Brahmins did most of the reading, writing and conducted the religious ceremonies. Kshetria were the kings and the warriors and were concerned with border protection and ruling the nation. Baisya were the businessmen and traders. Sudras on the other hand were laborers and scavengers. But with time, Brahmins, Kshetria and Baisya decided that they were superior and that was how the discrimination and the domination had started. To

the clear mind, it all appears to be a misinterpretation of the facts. It actually could be a vague remnant of the genetics of the ancient world when the science and biology was much more advanced than what it is at present.

We could still feel the cast system in Bumbure and surrounding villages but this year the Magars and BKs were much more open and participated whole heartedly than last year. Their confidence seems to have surfaced after they realized that the Moving Mountain Trust team doesn't discriminate anybody based on cast system.

Place distribution

Most of our patients were from Jubing VDC including Bumbure, Bupsa and Kharikhola. The catchment area was not very different from last year. But a significant number of people from Bang and Basa VDC attended the clinic this year as compared to last year. These places are very far from the clinic, at least 2 days walk, and the only reason these people made it to the clinic could be that we were there for 10 days instead of 7 days like last year.

Disease pattern and disease burden

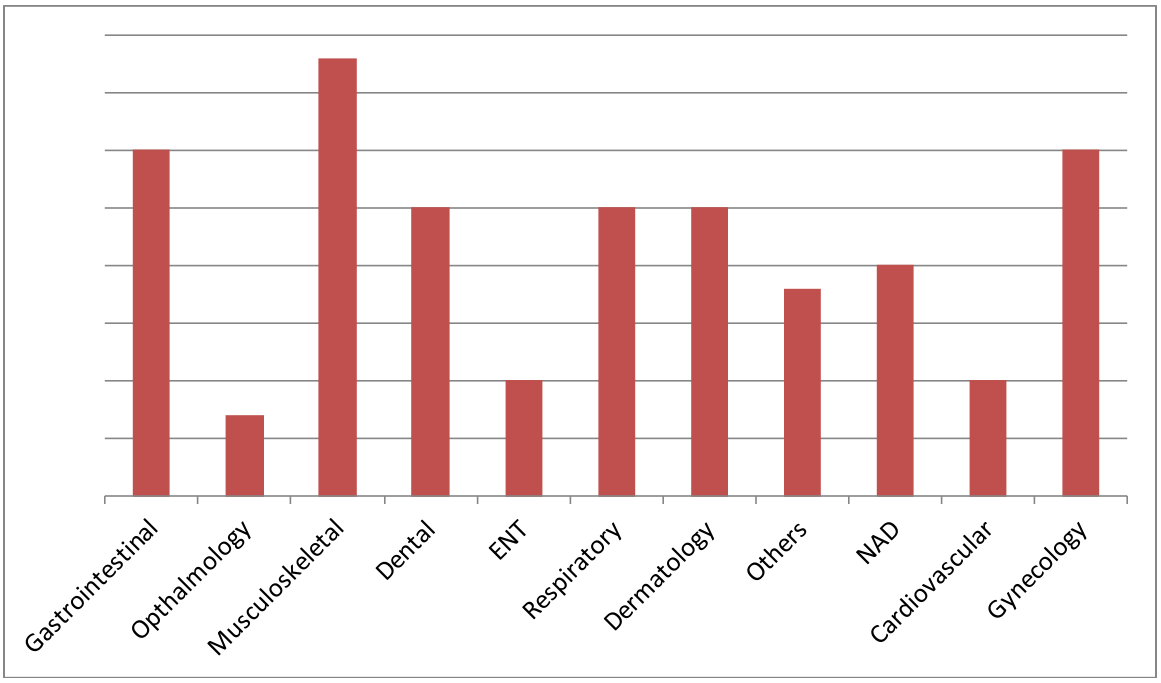
People had variety of complaints and most people had more than a single complaint. Following is the graphical representation of the frequency of the diseases in the total population visiting the Moving Mountain clinic. Since many people had more than one problem, the graph displays the frequency of the diagnosis or the prevalence of the disease in the population visiting the Clinic.

Table showing the comparative diseases between the country and Solukhumbu district

Top Ten Diseases Accounting for Morbidity in the country*		Common diseases found in Bupsa/Bumbure health camp
Abdominal Pain	0.96	Abdominal pain
Acute Respiratory Infection (ARI)	3.13	Gastritis
Chronic Bronchitis	1.06	Arthritis
Diarrheal Diseases (CDD)	3.35	Skin Disease
Ear Infection	1.40	ARI
Gastritis	1.95	COPD
Intestinal worms	2.82	Diarrhea
Pyrexia of unknown origin	2.02	Ear Infection
Skin Diseases	5.51	Eye infection
Sore Eye and Complaints	0.93	Intestinal Worms
		Toothache

*Source: statistical year book of Nepal 2001

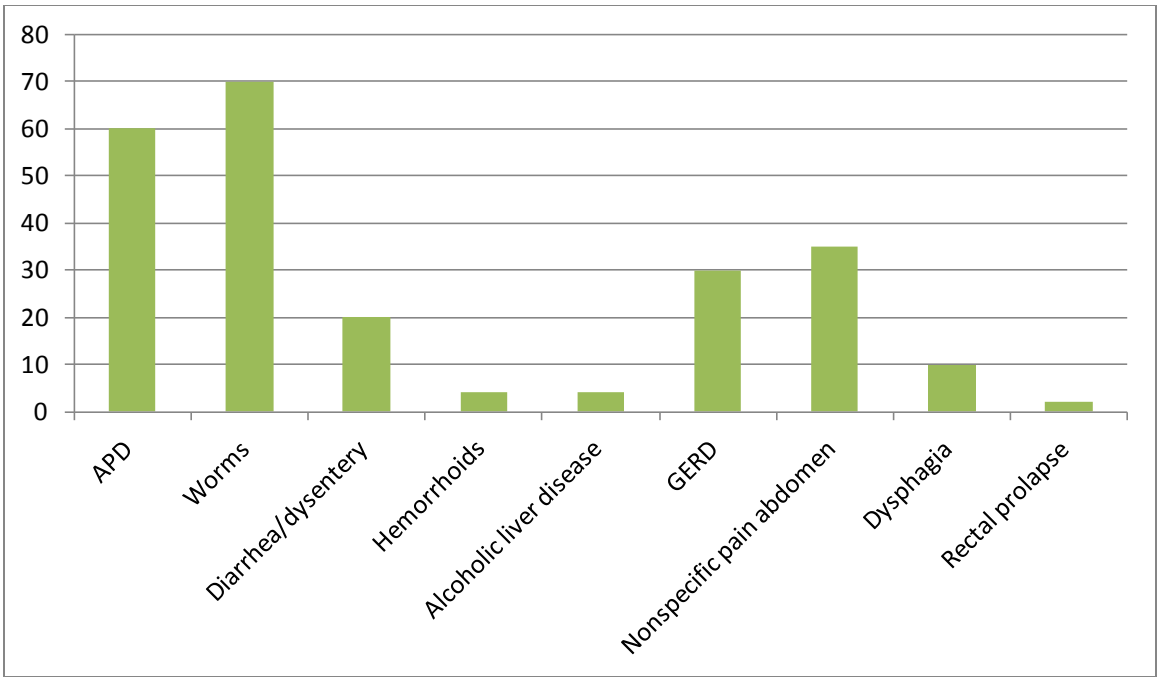
Prevalence/ Disease Burden



Musculoskeletal, gynecological and gastrointestinal problems were the most common symptoms like last year. Dental and dermatological symptoms were a close second this year. It is because we had emphasized on dental clinic this year and it obviously was an attraction to the public.

Gastrointestinal

Gastrointestinal diseases are very common in Nepal wherever we go. This system comes in direct contact with the outside world through food and water and that is precisely where the problem is. It is the problem of hygiene and the food habits.



Disease Category

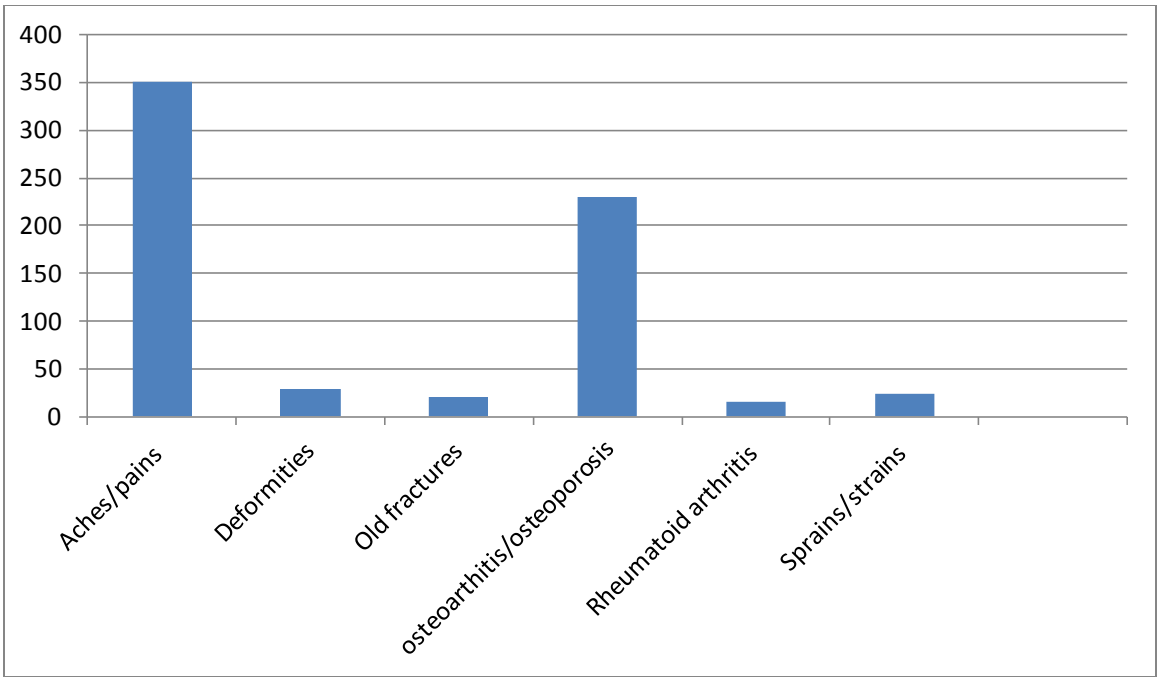
APD (acid peptic disorder) or heartburn is very common in Nepal. It was more common in the Sherpa population in solukhumbu. This is probably due to their habit of consuming a lot of fat in their food and their drinking habits. On the other hand, worms, diarrhea and dysentery were more common in the BKs and Rais and that is obviously due to their poor hygiene.

One interesting finding about Alcoholic liver disease is that we didn't find many people with alcoholic liver disease or cirrhosis. It did not go exactly with the habits of alcohol consumption in the community. Probably some genetic factors play role in that particular community in Nepal.

Musculoskeletal problems

Musculoskeletal problems are very common in rural parts of Nepal. It is because of the tough field work they have to do for their daily living.

Not much could be done for these conditions. Analgesics and anti inflammatory medications could provide short term relief. People were not very receptive of the idea that the real long term solution to the problem is physiotherapy. They believed that there should be pills to take care of the problems. We certainly need to work on this field and emphasize on posture hygiene and physiotherapy



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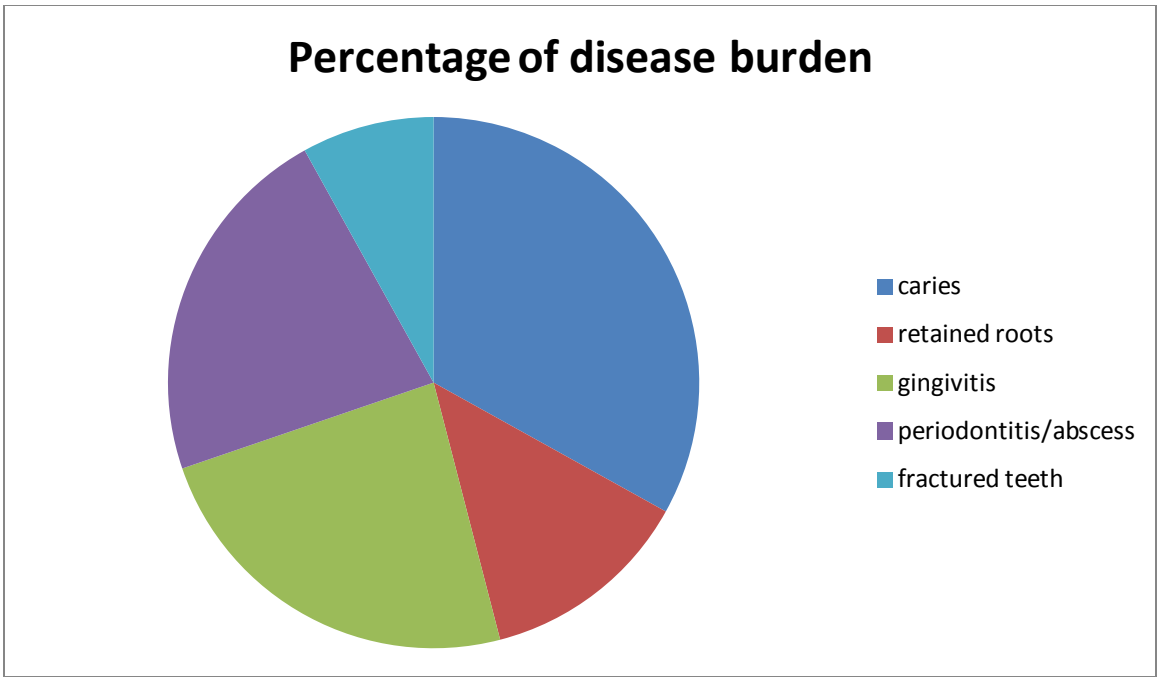
Dental/Oral health

People do not regard dental and oral hygiene to be a problem unless it is painful. They all had poor oral hygiene and bad teeth unless proved otherwise. A number of home remedies are practiced in the villages before they consider going to a health personnel for e.g. applying clove oil. People have unreliable brushing habits and children are following that trend very closely. Only 384 of the1750 patients could be consulted in the dental department because most of the dental works were time consuming and we had only one dentist.

Almost all of the patients had caries and many had multiple carious teeth. Many teeth were salvageable by proper filling whereas some other teeth needed root canal treatment which was not very feasible in the clinic due to time constraints. Many had retained roots secondary to failed extraction at home or in the health post.

Education on this matter was our concern. The school children were more receptive of the advice than the adults and we did have a session in the field to demonstrate the proper brushing technique to the kids. They enjoyed it very much and were very happy to get a toothbrush as a present

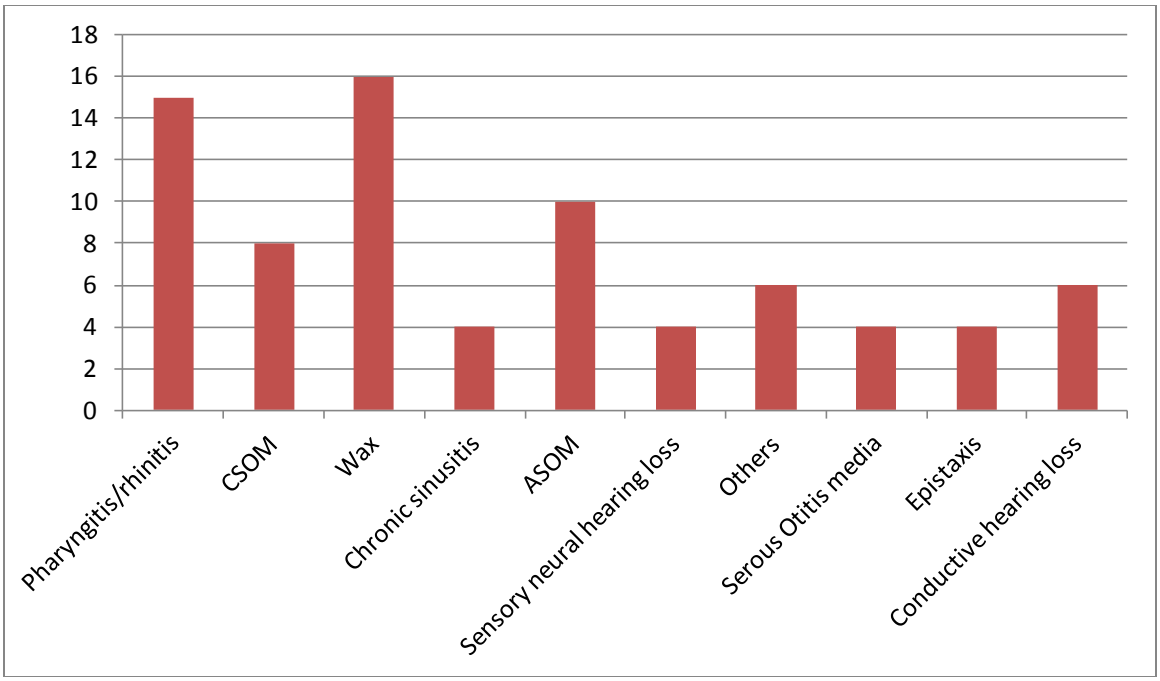


Dental problems

ENT

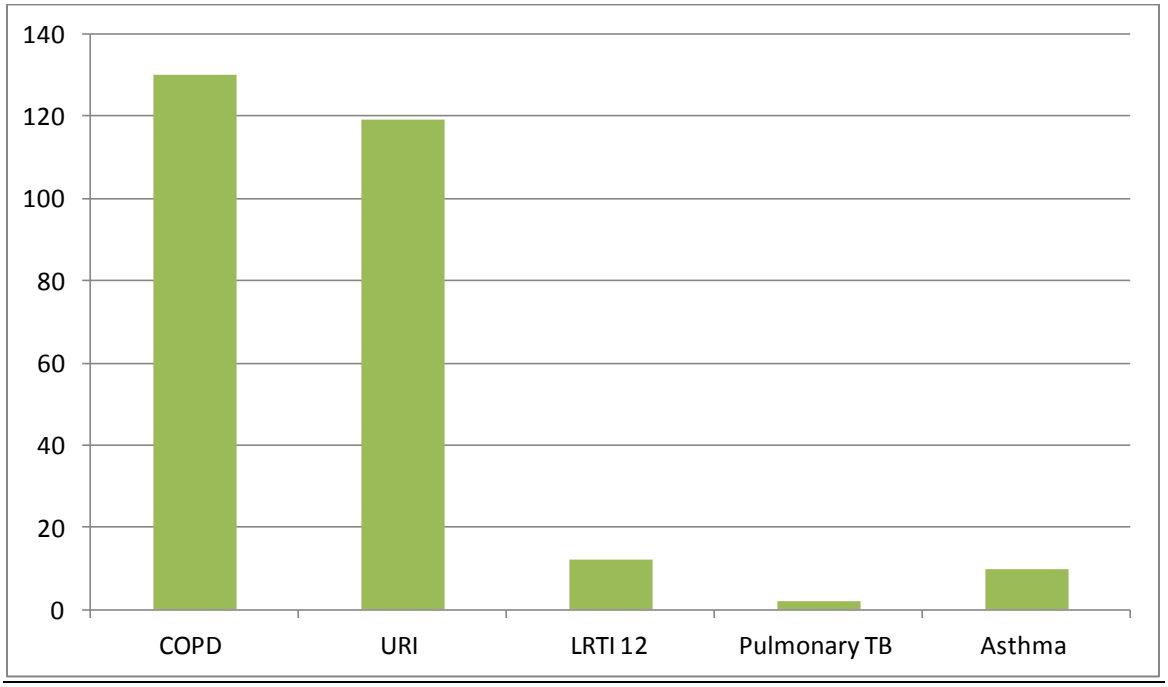
Ear nose and throat problems are very common in Nepal and are the cause of significant morbidity. Most of these problems are the problems of childhood. Common condition like an ear discharge, when not properly taken care of, can progress to chronic suppurative otitis media and then to hearing loss leading to learning disabilities and poor mental development. ASOM and CSOM were very common in the clinic. We treated these conditions though the permanent cure for perforated TM and CSOM, which is surgery.

Wax though not a dangerous condition was significantly present in people's external auditory canals and possibly contributed to some of the conductive hearing loss. We were helpless regarding sensory neural hearing loss which was present mostly in the elderly population as the management of this condition requires exotic investigations and possibly a hearing aid.



ENT disease frequency

Respiratory problems

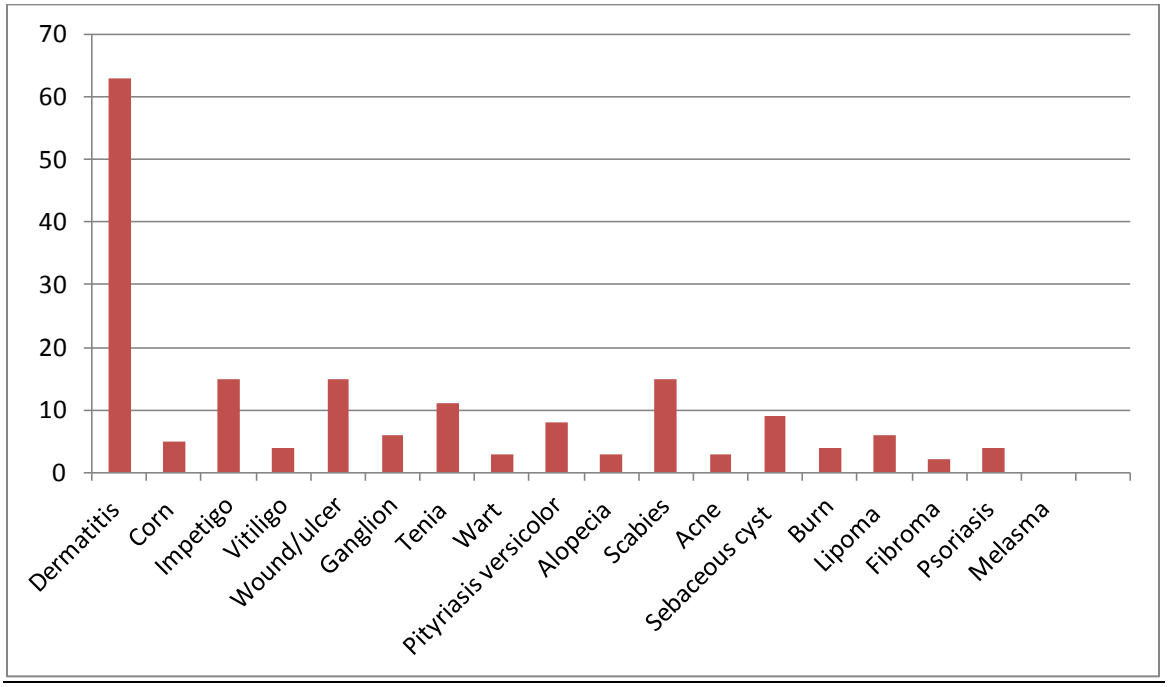


Disease Frequency

Respiratory problems are very common in all parts of the globe. Notably, frank COPD was disturbingly common especially among BK women. Their smoky ovens and ill ventilated houses added to their smoking habits in causing COPD. Unfortunately COPD is a progressive disease and we do not have very many options locally except for giving up smoking in people who smoke.

Dermatology

Disease Frequency



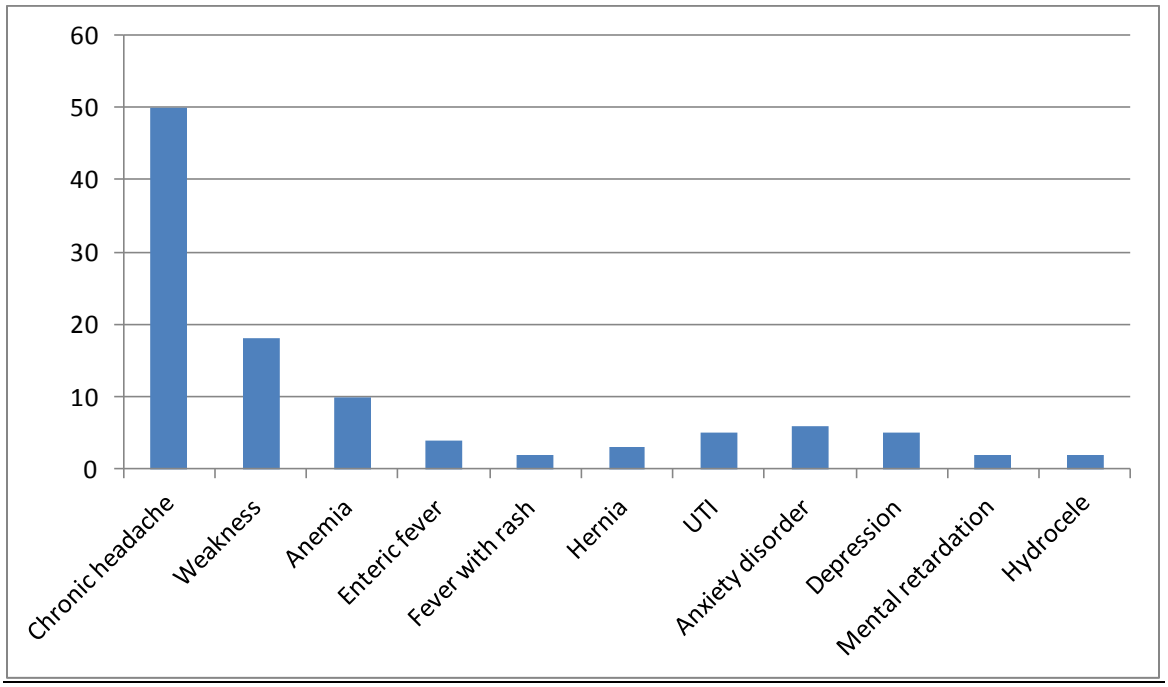
Disease Frequency

Like mentioned last year, people are not concerned about the dermatological conditions very much unless it is painful or obviously disfiguring. Most of it was because of poor hygiene. It is a cold place and people don't generally take a shower that often.

Lumps in the skin on the other hand seem to frighten people. They feared if it were cancer of some sort. So quite a number of people wanted the benign lipomas and fibromas to be removed. Several people had post burn contractures. Some were too big and needed flap surgeries and was not possible to do it there.

Other conditions

Following is the list of diseases and conditions listed under the heading of 'others'



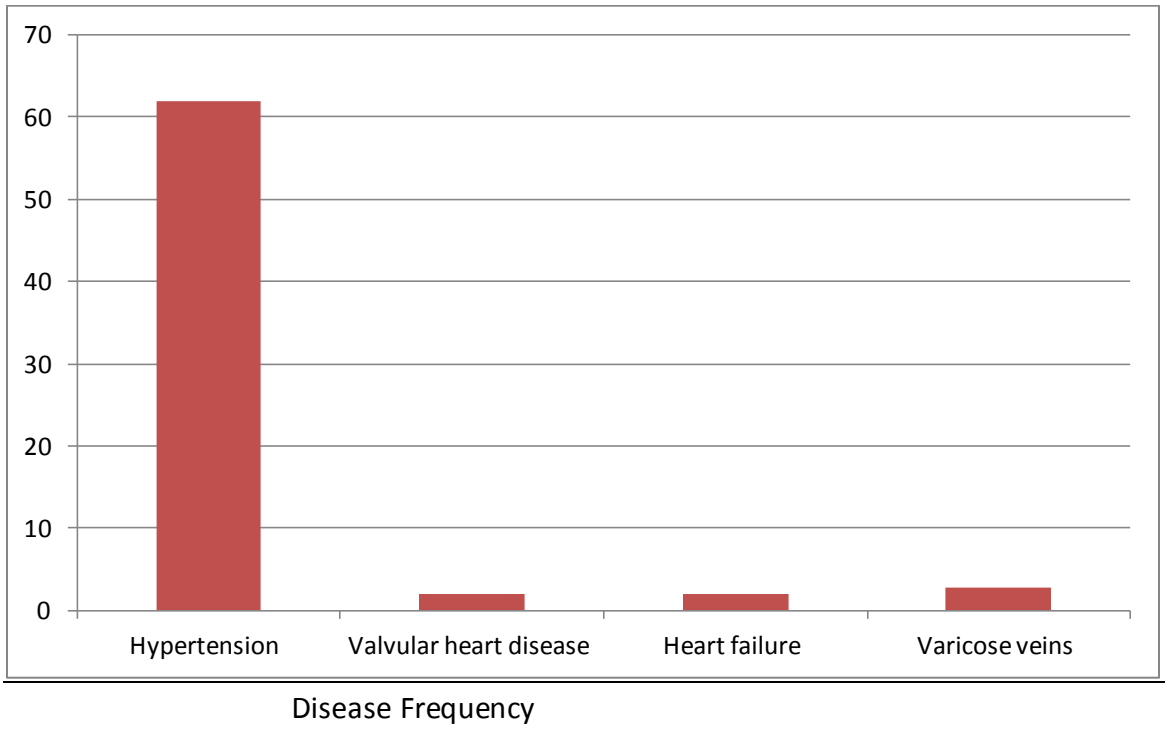
Disease Frequency

Headache was a frequent complaint and particularly in the young adults and teenagers. This time, to some extent, we were able to sort out refractive errors as the cause of headache in these patients. Many of them didn't have any identifiable etiology or a defined syndrome as per the cause of the headache. Symptomatic treatment was provided for them.

Normal findings

These were people who came to the clinic for a general checkup. They didn't have any complaints. However many ended up making some complaints because they thought they should have some complaints to visit the doctor. 'What brought you to the clinic?' was a more appropriate question to them than 'what is your problem?' People could be a little overwhelmed when they see a big crowd and total strangers in the clinic.

Cardiovascular

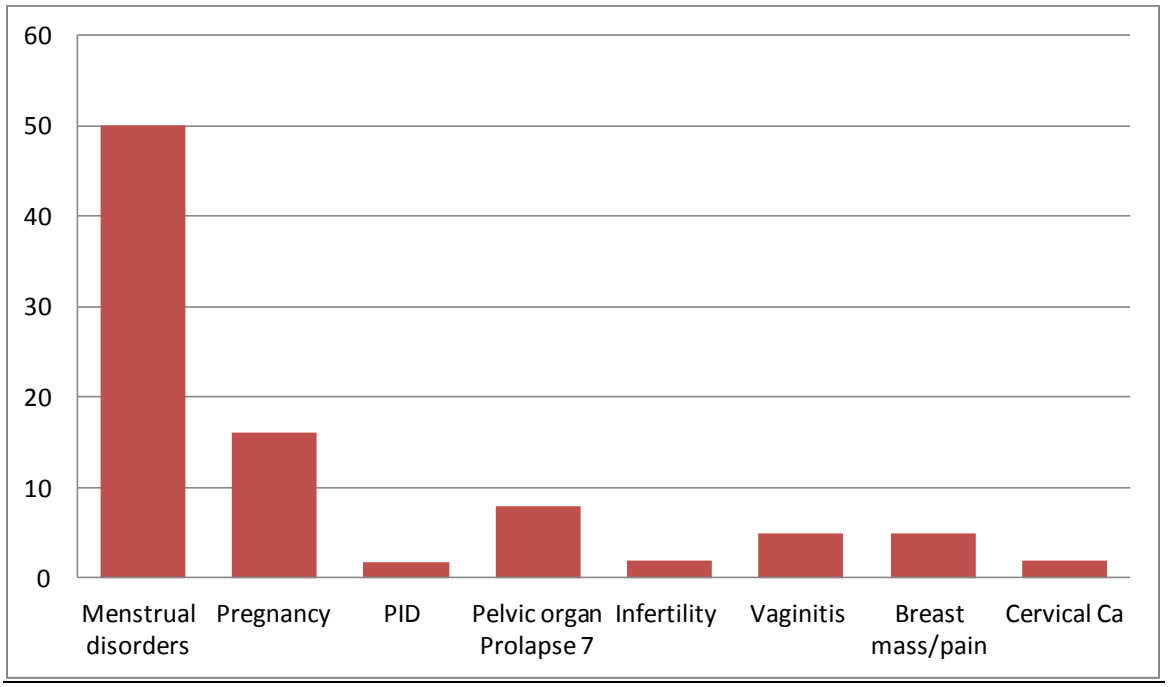


It is normally unusual to find many hypertensive patients in the villages of Nepal. However we did come across a number of hypertensive patients. Most of them were Sherpas and were known hypertensives with poorly controlled hypertension usually secondary to poor compliance.

People have many myths regarding hypertension. One of them is that it is good to postpone taking any antihypertensive medications until they have symptoms. Compliance is a universal problem with hypertension worldwide and KK is not an exception. Sherpa's salted *butter tea,* drinking habits and the habit of consuming a lot of fat probably accounts for the higher percentage of hypertension in this ethnic group.

Appropriate treatment and referrals were made for other cardiovascular conditions.

Gynecology and obstetrics



Disease Frequency

Women in this region do have many gynecological problems but they generally tend to hide these problems. Some women had menstrual problems and most of these were related to the use of DMPA.

Some of the pregnant women visited the clinic for ANC. Women generally resume household work soon after childbirth. This is the primary reason why women in Nepal have different degrees of uterine and vaginal prolapse. We however didn't come across many of these patients. The reason could be that we didn't specifically ask for these problems. I think we will need to conduct a specific survey or a gynecological camp to find the exact prevalence of these cases. Lot of women does not complain but it doesn't mean that it is not a problem for them. Not infrequently this is the reason for marital disharmony in families.

The procedure room

Crepe bandage and diclofenac gel massage to various joints	40
Arthrocentesis for OA	10
Intra articular depomedrol injectionfor OA	28
Dressings and wound care	15
Incision and drainage of abscess	6
Excision of mole	4
Lipoma/ganglion excision	6
Sebaceous cyst excision	3
Pilonidal sinus resection	1
Excision of corn	4
Foreign body removal in hand	2
Suturing of laceration	5
Hydrocele	1
Dilatation and curettage	4
Release of contracture	1

One of the bigger rooms was used as a procedure room. Whichever doctor needed to do a procedure on their patients could just walk in and do the procedure with the help of a nurse or another doctor.

Most of the procedures were various dressings of wounds and skin conditions. Application of the diclofenac gel and crepe bandage to various aching joints was another frequent procedure performed. Lump and bump surgeries for e.g. excision of lipoma, fibroma, and sebaceous cyst was done on more people this time as compared to last year. Arthrocentesis and intra articular injection of steroids were also done on a number of patients. Various eye procedures were done to help the patients symptomatically.

Discussion

The Moving Mountain Trust health camp had only 3 people with hardly 4 days of clinic in 2010 due to bad weather. There was a huge turnout of people in the clinic so time became the major limiting factor in providing any service to the people. There were many procedures to be performed but doing so would have backlogged all the people waiting for days to be seen by the doctor. Thus we mainly concentrated on consultations and some procedures were performed after regular hours to avoid going down on the number of consultations per day. People would have benefited from many surgical and dental procedures but we couldn't address those unless they were urgent. We had limited break times and no substitute when somebody wanted a holiday or when one of us didn't feel well. In spite of short period and limited manpower, 2010 however was a success because of the dedication of the team and active participation of the people of Bumbure who helped us in helping themselves.

2011 had a different vibration with some very important step ups. We were experienced. We had a huge number of young and enthusiastic medical students, a better dental team in addition to two doctors and 2 nurses and a paramedic. It was a definite advantage and likewise we could see double the number of patients and could provide multiple services to the people at the same time. We could do more surgical and dental procedures. We stayed for more days in 2011 which gave us time to do some extra surgical procedures. The longer stay also allowed time for people from far away to make it to the clinic. Differences in opinion certainly arises with a bigger number of people with different backgrounds but we believe those issues were dealt with constructively and that we learned a lot from them.

The number of people coming to the clinic was much more in 2010. It is because people knew who we were and people felt more comfortable. Also that people were pre informed well in advance. The disease pattern, the population pattern and the problem list however were exactly the same in both years. One striking difference is the number of people with gynecological problems and dental problems. It is because we will find what we look for.

Feedback/shortcomings

Feedback was sought frequently during clinic days from team members and from the villagers in both Bupsa and Bumbure.

Most of us thought that the clinic hours, number of days, organization, structure and concept was very good. The team members thought that the rooms and space were insufficient but manageable for the given situation. Crowd control and triage seemed a little thrown off in the beginning but was brought under control by the able volunteers from the local community and Bristol students.

All of the team members found the patients to be very pleasant and the local helpers who helped with translations and various other tasks were very helpful. All found working in Solukhumbu a very good experience which allowed them to see the other side of the world. Role definitions and communication between staff in the clinical side and the lodging facility and the management issues on the non clinical side were the areas where members have raised concern.

Similarly, lack of comprehensive briefing in the beginning about expectations of the clinic caused people extra time and effort to adjust to the situation.

The villagers on the other hand were very thankful for the work Moving Mountain trust had done. The only concern of the public was the crowd as many people had to wait for several days to get a consultation. The support staff on the other hand, which consisted mostly of the teachers of the primary school, had a difficult time helping the clinic in the first few days. However most of the things went smoothly as they were all motivated.

Future perspectives

We spent most of the time consulting patients for their general problems as shown in the statistics section of the report. It might seem to observers that we didn't make much difference in people's lives by addressing those complaints of heartburn and aches and pains because those problems were there last year and the same problems were there this year. It might appear that only surgical interventions would mean doing something. When people came one after the other with the same complains, one could have easily wondered 'what am I doing here? Am I helping these people? Are these people genuine?' The answer is yes. Those people were genuine. If we look at any ambulatory medicine centers, majority of the clinic visits are for similar problems. And these are their basic problems. Maybe we didn't cure them, but we did give them an option of getting the treatment and knowing their symptoms better. If people followed our advice properly, they would benefit and it would make their lives symptom free. A lot of the times, the general consultations helped in alleviating their confusion and fear of what their symptoms meant. For example, many people thought their heartburn could be a symptom of cancer or a benign skin nodule could mean a cancer.

Surgical interventions look dramatic and give instant reward in many occasions but we should consider whether that is a major problem. All of this has to be looked at as a part of the package. We cannot do one without the other. We cannot conduct only general clinics nor can we conduct surgical clinics only. We need to balance all aspects of care and we should be able to address the majority of the problems which people have. This is also where the importance of felt need and observed need comes into play. People might think heart burn is their major problem whereas we might feel that dental problems in general and gynecological problems in women population cause more morbidity than heartburn. Then it will be a matter of negotiation between felt needs and observed needs to come up with a list of definite needs. Cultural, educational and religious background influence people's values and we all will need to respect this and go along with it rather than trying to impose one's ideas on people to bring about dramatic changes. Active participation of the locals in the planning, decision making and implementing any undertakings is very valuable in conducting projects like ours in rural Nepal. This is the key to success.

We had varied opinion on how we should coordinate specialized care Bumbure. Whether we should have multiple specialists at the same time so that people would get many services in one single attempt or whether we should do one specialized service at a time so that we could concentrate on one aspect and avoid managerial problems. We have limited space for clinic especially in Bupsa. The other problem of doing many things at a time is crowd control and coordination. It is thus advisable that we conduct one specialized clinic a year and keep surveying for other significant problems requiring specialist care.

The medical clinics conducted on a yearly basis have an inherent drawback of the lack of continuity. Continuity of care and follow up is vital for an optimal outcome. Thus the clinic cannot be a solution to our objective of keeping Bumbure area healthy in the long run. What

we will need is the constant availability of skilled manpower in the clinic and appropriate infrastructure to deal with the common problems and emergencies. We should therefore work on hiring a constant manpower for the clinic. We should also work on upgrading the clinic. Basic sanitation measures, proper water supply, electricity, curtains, beds, sterilization facilities, essential instruments are all necessary in the clinic.

The Moving Mountain Trust stands exactly for that. Our mission is to help improve the health status of the people of Bupsa, Bumbure and neighboring villages. We need to have a clear vision and a good long term plan. The regular health camps will familiarize us with the common health problems of the community and will help us create a database which will be necessary for long term planning. It will aid us in gaining the confidence and trust of the villagers, which is a key component to the success of any such 'provided plans'. The camps are also providing cure and solution to many of the common ailments. There are various other parties involved in improving the health status of this area and a coordinated approach is needed to meet our common objectives.

At present, there exists a Health Post in Kharikhola village under the management of Kathmandu University Teaching Hospital which provides symptomatic treatment of few medical problems. There are some paramedics but no doctors and understandably without any diagnostic services and emergency care and surgical facilities. Hence, Moving Mountain Trust can think about building a "Community Hospital" in Bumbure, which can cover many VDCs and more than 20,000 populations living in the southern part of the district.

However, before deciding to build a hospital in a remote area like Bumbure, Moving Mountain Trust should have a concrete plan for the sustainability of the hospital. These include

- Sources of support in term of finance and health manpower including a General Practitioner (GP), paramedic, lab technician and nurses among others.
- Provision of diagnostic modalities including Laboratory, X-Ray and Ultrasound at minimum.
- Sustainable sources of income generation to run and maintain the hospital.
- Active community participation in management of hospital.

I have already mentioned that although the short clinic of these kinds cannot be a solution to our objective of keeping the area healthy, I still believe that if people followed our advice properly, they would benefit and it would make their lives symptom free. We all know that active participation of the locals in the planning, decision making and implementing any undertakings is very valuable in conducting projects like ours in rural Nepal. This is the key to success. Hence, I am in favor of organizing more clinics with little more extended time period which will give us an opportunity to interact with the locals so that we really get an idea whether a Hospital in Bumbure is feasible or not. Moreover, with more extended facilities in

the clinic (that may include the general consultations as well as some surgical interventions) we can treat many conditions then and there while we plan for future.

Secondly, if we plan for a 'Community Hospital' in the long run, what we will need is the constant availability of skilled manpower in the clinic and appropriate infrastructure to deal with the common problems and emergencies. We may have varied opinion on how we should coordinate the regular as well as specialized care in the clinic, but we all agree that it is needed and if worked with good coordination and cooperation with the villagers, many things are possible.

I always believe that investment in educating locals especially in paramedic courses is a must to make such kind of projects sustainable. It will definitely take few years to build a Hospital, so in the mean time we have to train someone from Bumbure who is committed to come back and serve his/her people. We will be there to help to further strengthen his/her knowledge and clinical skills.

It is possible to generate some income by performing some medical and surgical procedures including acute and short term management of various emergency conditions as well as elective management of some chronic general surgical, gynecological and orthopedic conditions. These are the one of the source of income generation and the management should concentrate on training the staff to make them competent in these procedures.

I agree on the idea of conducting yearly medical camps till we are ready to start working on constructing hospital.

Village Committee is the key to success; we need to participate them in all the activities so that they can feel that whatever is being done is for them only. I agree that these people have worked with us for many years on the other projects we have done in Bumburi and Bupsa and so far it has been very successful. The villagers themselves have donated much time and land, thus ensuring that their commitment is as much as ours. Joint commitment creates joint responsibility, which helps for sustainability.

Building and equipping the clinic: this can be done in the period of couple of years.

Some other issues:

1) As Moving Mountains believes in supporting projects that are financially sustainable and will not pay for a clinic and then spend the next ten years providing continued funding for staff, drugs, equipment and maintenance, there should be some alternate provisions to sustain the clinic/hospital. So therefore the clinic has to have an income from the patients which will allow

it to pay the monthly salary for the staff, the drugs and the maintenance. So it comes down to how a mountain clinic makes money. We can charge consultation fee a minimum of NRS 25/- for regular hours and NRS 50/- in off hours as an emergency registration fees. Initially we can expect a minimum of 15-20 patients per day on an average, they have to pay for the medicines and they can be charged extra for such certain procedures.

2) Getting medical staff in a mountain clinic is not easy. Yes, we can train villagers to become paramedics and train people in primary health care, in order to tackle the basic issues. But what about a General Practitioner? This problem is there all over in Nepal, not only in Bumbure.

3) As MM can provide financial income by bringing medical students to the clinic in Bumburi, but these medical students require a supervising Doctor. So therefore - no Doctor = no medical students = no income for the clinic. Once we build the clinic and a resident doctor is there, this issue will be taken care of forever. In the mean time we can continue the yearly medical camps.

4) We will need to register the new clinic with Ministry of Health and it will have to be incorporated into the Jiving district development committee. Government won't take any responsibility for such organization, maximum we can expect is some free health education related poster and pamphlets, some iron tablets and worm medications

In fact, the issue of a clinic is easy to solve, but the issue of making it work financially is much harder. Clinics traditionally fail because they do not get enough income from the patients to pay for the cost. There is no point in spending thousand dollars on a building if it ends up empty. However, for initial few years we need to support the clinic in many aspects including salary for the staffs. It is only after few years of hard work, we can expect the clinic to be self sustainable.

A qualified doctor should be able to do many minor surgical procedures which will be charged to the patients and this is and should be the major source of income of the peripherally located Hospitals, not the registration fees only. These procedures include-

1. General surgical: minor and intermediate surgeries like

- Incision and drainage
- Removal of lumps and bumps
- Hernia and hydrocele surgery

2. Gynecological and obstetric surgeries like

- Conducting deliveries (normal and assisted)
- Dilatation and curettage (both therapeutic and diagnostic)
- ANC Clinic

- Family planning services (both temporary and permanent)

3. Orthopedic procedures like

- Management of simple undisplaced fractures
- Closed reduction under anesthesia etc.

Having said this, we have to be clear that good external support is needed during first few years even for the super specialty hospitals in the big cities with renowned doctors working on it. When facilities are increasing, income will go up.

After completing successful camp, it has been felt by the villagers, volunteers and the medical team that now time have come to think about a sustainable solution to keep Bumbure and surrounding area healthy. To achieve the goal, the assessment done during the camp period clearly tells us the importance of a 24 hours running clinic/hospital in Bumbure with a well trained paramedics and a nurse to start with(supported by western volunteer doctors, if possible) throughout the year along with a basic laboratory and imaging facility in the clinic. Organizaion like Moving Mountains can still run a specialist clinic especially surgical clinic of one week duration once or twice a year so that people don't have to travel all the way to Kathmandu for the surgeries that can be done in Local setup.

Epilogue

I went to a medical school in Nepal where public health was a major part of the teaching. The curriculum was designed to produce doctors who would be ideal health care providers and community leaders in any parts of Nepal. I have frequently visited and worked in many remote parts of Nepal. On every such occasion, I have reflected back and have found our teaching to be truer, at least for a country like Nepal.

I have advocated this issue every time I had spoken about health and Nepal and I believe it is worth mentioning this time as well.

The spurt of modern medicine has moved the art of healing from community to person and from person to organ system to organs to cells and from cells to molecules. The advancing technology has become largely inappropriate to the needs of the majority of the people. It has been leading the health system towards the wrong direction i.e. away from health promotion of many to the expensive treatments of the few. At this point, let me highlight some facts:

- With the costly treatments, increased benefits in terms of health have not been achieved.
- Certain diseases from ancient times (e.g. leprosy, malaria) are still big threats to life especially in developing countries despite spectacular advances in medicine.
- The life expectancy has remained low and infant/maternal mortality still high in developing countries despite the innumerable number of hospitals and care centers.
- There is a glaring contrast in the health status between developed and developing countries and between rural and urban dwellings in developing countries.

These have been criticized throughout the world as a 'social injustice' and as 'the failure of successes'.

Another fact is that in most of the developed countries of the world, the mortality rates, life expectancies and control of diseases had improved before the emergence of modern medicine. It was all through primary health care, which consists of awareness, improved nutritional supplies, better sanitation etc.

The strategy of who which perfectly matches a country like ours is the 'district health system based on primary health care' which has been defined as follows:

'A district health system based on primary health care is a more or less self-contained segment of the national health system. It comprises first and foremost of a well defined population, living within a clearly delineated administrative and geographical area, whether urban of rural. It includes all institutions and individuals providing health care in the district, whether

governmental, social security, non-governmental, private of traditional. A district health system therefore consists of a large variety of inter-related elements that contribute to health in homes, schools, workplaces and communities through the health and other related sectors. It includes self care and all health care workers and facilities, up to and including the hospital at the first referral level and the appropriate laboratory, other diagnostic and logistic support services. Its component elements need to be well coordinated by and officer assigned to the function in order to draw together all these elements and institutions into a fully comprehensive range of promotive, preventive and rehabilitative health activities'.
Of course the issue of specialized care can be argued and definitely we need specialized care, ongoing research and technological advances but the bulk of the problem or the base of the pyramid is the basic preventive and promotive health in a country like Nepal. The hierarchy of the needs requires that we concentrate and spend more of our resources for the basic health needs of the people.

I believe that Moving Mountain Trust Nepal chapter is a voluntary meet of like minded people. It is committed to raise the health status of the people of Bumbure and around but the aforementioned strategy seems like a formidable challenge. So how do we proceed? Do we get frustrated over the deplorable situation and start minding our own business or do we come up with a smart plan and defined objectives, work on it and enjoy our work?

I usually like to look at the history of successful people while formulating a plan and a strategy. For the Everest region and bumbure in particular I take the example of Sir Edmund Hillary. He started from a scratch 5 decades ago and every little thing commenced then has become a huge success for this region at present.

Rome was not built in a day and all journeys start from a step. We do not want to make big plans only to fail. We want to work in small steps, continuously, adjusting to the changing situations, keeping in mind our limitations. We will thus concentrate on Bumbure and surrounding village to improve their health status.

List of Medications for the 10 days clinics

NAME AND FORM	Total amount needed	Current Stock	From UK	Total to be purchased
Gastrointestinal				
Tab.Ranitidine 150mg	5000	0	0	5000
Cap.Omeprazol 20mg	1000	0		1000
Tab.Ciprofloxacin 500mg	200	0	0	200
Tab.Metronidazole 400mg	500	0		500
Metronidazole syrup	70	0	0	70
Tab.Azithromycin 500mg				
Tab 500	60	0	0	60
Syrup	50	0	0	50
Tab.Mebendazole 100mg	400	0	0	400
Albendazole 400				
Tab	200	0	0	200
Syrup	100	0	0	100
Tab.Tinidazole 500	100	0	0	100
Tab.Dulcolax	100	0	0	100
Cotrimoxazole syrup	50	0	0	50
Tab.Antacid	2000	0	0	2000
Tab.Metoclopromide 10mg	250	0	0	250
Tab.Buscopan 10mg	200	0	0	200
Tab.loperamide 2mg	100	0	0	100
Oral rehydration sachet	200	0	0	200

Musculoskeletal

NAME AND FORM	Total amount needed		Current Stock		From UK		Total to be purchased	
Paracetamol 500 mg								
Tab	2000		0				5000	
Suspension	200		0		0		200	
Tab.Diclofenac SR 100 mg	3000		0		0		3000	
Tab.Ibuprofen 400 mg	1000		0		0		1000	
Diclofenac gel	500		0		0		500	
PoP								
4 inches	40		0		0		40	
6 inches	30		0		0		30	
Inj.Depomedrol	50		0		0		50	

Respiratory

NAME AND FORM	Total amount needed		Current Stock		From UK		Total to be purchased	
Tab.Codeine 15 mg	200		0		0		400	
Cough syrup (supressant)	100		0		0		100	
Cough syrup (expectorant)	200		0		0		200	
Cold tablets	200		0		0		200	
Salbutamol								
4 mg tab	1000		0		0		1000	
Syrup	30		0		0		30	
Tab.Theophylline 300mg	200		0		0		200	
Tab.Prednisolone 5mg	400		0		0		400	
20mg	100		0		0		400	
Tab.Frusemide and amiloride	200		0		0		200	
Salbutamol inhaler	150		0		0		150	
Tab.Cotrimoxazole 960mg	200		0		0		200	

Cap.Amoxycillin 500 mg	500		0		0		500	
Amoxicillin syrup	200		0				400	
Cap.Doxycycline 100 mg	200		0		0		200	
Tab.Ciprofloxacin 500 mg	200		0		0		400	
Tab.Erythromycin 500 mg	100		0		0		100	
Tab.Augmentin 625 mg	100		0		0		200	
Cardiovascular								
Tab.Aspirin 75 mg	100		0		0		100	
Tab.Digoxin 0.25mg	200		0		0		200	
Tab.Nifedipine 10 mg	100		0		0		100	
Tab.Atenolol 25 mg	1000		0		0		1000	
Tab.Amlodipine 5mg	1000		0		0		1000	
Tab.Hydrochlorthiazide 25 mg **NAME AND FORM**	1000 **Total amount needed**		0 **Current Stock**		0 **From UK**		1000 **Total to be purchased**	
Gyne/obs								
Iron sulphate	4000		0		0		4000	
Tab.Calcium with Vit D	1000		0		0		1000	
Tab.B complex	6000		0		0		6000	
B complex syrup	100		0		0		100	
Tab.Meftal spas (mefenemic acid)	300		0		0		300	
Tab.Oral contraceptive pills	150	Cycles	0	cycles	0	cycles	150	cycles
Pregnancy test kits	30		0		0		30	

Ring pessary							
Small	20		0		0		20
Medium	20		0		0		20
Large	20		0		0		20
Cap.Fluconazole 150 mg	100		0		0		100
Clotrimazole vaginal pessary	100		0		0		100
Fluconazole vag pessary	30		0		0		30
Condoms (good quality)	200		0		0		200
IV Antibiotics							
Inj.Ciprofloxacin 200mg	60		0		0		60
Inj.Metronidazole 500mg	100		0		0		100
Inj.Ceftriaxone 1gm	40		0		0		40
Inj.Gentamycin 20mg	50		0		0		50
Inj.Crystalline Penicillin 10 lakh	100		0		0		100
Inj.Ampicillin 500mg	50		0		0		50
Inj. Cefotaxim 1gm	20		0		0		20
Inj. Chloramphenicol 500mg	20		0		0		20
NAME AND FORM	**Total amount needed**		**Current Stock**		**From UK**		**Total to be purchased**
Dermatology							
Steroid ointments							
hydrocortisone	200		0		0		200
betamethasone	100		0		0		300
Clotrimazole cream	200		0		0		200
SSD cream	50		0		0		50
Neosporine ointment	100		0		0		100

Erythromycin ointment	50		0		0		250	
Cloben G	100		0		0		100	
Tab ctz	600		0		0		600	
Cloxacilin cap								
500 mg	200		0		0		1200	
250 mg	200		0				200	
Tab chlorpheniramine	200		0		0		600	
Scabies lotion (benzylbenzoate 25%)	100	Bottles					100	
Psychiatry/ Mental health								
Tab.Amitriptylline 25 mg	300		0		0		300	
Tab.Fluoxetine 20 mg	200		0		0		200	
Tab.Alprazolam 0.5mg	100		0		0		100	
Tab.Haloperidol 10 mg	100		0		0		100	
Desk items								
Tongue depressors	200		0				200	
Betadine gargle	60		0				60	
BP set+Stethescope/Thermometers	3 sets/10	Nos.	0		0		10	
Cotton Wool Roll	4	Rolls	0		0		4	Rolls
Vaseline Onintment	60		0		0		60	
NAME AND FORM	**Total amount needed**		**Current Stock**		**From UK**		**Total to be purchased**	
Eye/ENT								
Moisol eye drop	100		0	bottles	0		100	bottles
Ciplox eye drop	150		0		0		150	

	Ciplox Eye Ointment	100		0		0		100	
	Ocuvir	20		0		0		20	
	Ocurest	20		0		0		20	
	Flur	20		0		0		20	
	Timolol 0.5%	10		0		0		10	
	Tropicamide 1%	5		0		0		5	
	Vitamin A cap 50000	100		0		0		#REF!	
	Tab Diamox	50		0		0		50	
	Candid Ear Drop	100		0		0		100	
	Nowax Ear Drop	200		0		0		200	
	Inj. Dexamethasone	5		0		0		5	
	Tab.Cortilone 20 mg	50		0		0		50	
	Syrup Periclox	50	Bottles	0		0		50	bottles
	NAME AND FORM	**Total amount**		**Current Stock**		**From UK**		**Total to be purchased**	
	SURICAL MATERIALS								
	PROLENE 1-0	1	BOX	0		0		1	BOX
	PROLENE 4-0	1	BOX	0		0		1	BOX
	SILK 1-0	1	BOX	0		0		1	BOX
	CATGUT 1-0	1	BOX	0		0		1	BOX
	NYLON 1-0	1	BOX	0		0		1	BOX
	NYLON 4-0	1	BOX	0		0		1	BOX
	Name and form	**Total amount**		**Current Stock**		**From UK**		**Total to be**	

	needed						purchased	
Emergency								
Inj. Adrenalin 1mg	20	Ampule	0		0		20	
Inj. Atropine	30	Ampule	0		0		30	
Inj.Hydrocortisone 100 mg	50		0		0		50	
Inj. Diclofenac 75mg	100		0		0		100	
Inj. Promethazine	100		0		0		100	
Inj. Metoclopromide 10mg	100		0		0		100	
Inj.Diazepam 2ml	20		0		0		20	
Diazepam tab 2mg	100		0		0		100	
Inj. Ergometrine	20		0		0		20	
Inj.Frusemide 20mg	100		0		0		100	
Inj. Pentazocine	20		0		0		20	
Inj. Chlorpromazine	30		0		0		30	
Inj. Oxytocine	10	Ampule	0		0		10	amp
Inj. Mephenteramine(phenylephrine)	20		0		0		20	
			0		0		0	
Inj. Ketamine	2	bottles					2	bottles
Inj. Pethidine	20	Ampule	0		0		20	ampules
Gluteroldehyde (Cidex) 2%	1	Ampule	0		0		1	bottles
Spiritit bottle	10	Bottles	0		0		10	amp
Betadine big bottle	10	Bottles					10	bottles
Inj. Buscopan 20mg	100	Ampule	0		0		100	amp
Inj. 5 % Dextrose	20		0		0		20	

	Inj. DNS	50		0		0		50	all
									plas
	Inj.NS	50		0		0		50	tic
									bottles
	Inj. RL	50		0		0		50	
	Inj. heavy xylocaine (5%)	1	Vials	0		0		1	vilas

APPENDIX

A Report by a Bristol Medical Student 2011

Solukhumbu Surgical Report:

Bupsa & Bumburi Free Medical camp

The Solukhumbu free medical camp was a great success this year seeing over 1700 patients within the 10 day period. The cases seen were across a wide age-group demographic and several interesting cases were seen. However it is safe to say the three most common medical themes seen were osteoarthritis (mostly in middle age/elderly), infectious disease (particularly paediatric cases) and gynaecological problems. Respiratory and dermatological cases were also frequently seen. Most cases were managed medically with drugs prescribed; it may be worth looking into the pharmacy inventory more carefully for next year's clinic as certain drugs (especially infection-related such as metronidazole) were either running low or out of stock before the end of the camp.

In terms of surgical cases, around 15 operations were performed. This includes: lipoma removals, granuloma and foreign body removals, ganglion excisions, pilonidal sinus resection, tuberculous lesion excision, head injuries, cyst removal, hydrocele and several D & Cs. Though there were a variety of operations performed, I believe more could have been done if the some extra equipment was present such as an ultrasound scanner for the consideration of removing uterine leiyomyomas and also examining the state of the fetus for the pregnant women that were present. Also, it may be worthwhile investing in some basic ENT equipment such as otoscopes to improve our treatment possibilities for such patients and also for general examination, especially as a lot of the children did present with signs of otitis media. Endoscopy was suggested by a colleague but expertise on its use has to be also considered. In this respect, I would recommend expanding surgical services for next year, with the presence of new equipment and also an improvement in the treatments with regards to increasing the sterile conditions (such as putting a sheet on the ceiling to prevent dust falling into the room). Of course, I don't recommend upgrading to the level of general anesthesia or any surgeries significantly larger than the one seen.

In terms of having a hospital built in the region, based on this camp and the group's opinion at the time, I would certainly promote the idea. The reasons are because of the remoteness of the area and the fact that patients in the region are plentiful and cannot afford/reach any decent healthcare from their homes. Also, it is come to notice that a lot of these patients suffer from chronic disease and one doctor's appointment or a few months worth of painkillers is no adequate in terms of long term individual care – a more permanent healthcare establishment is

certainly needed to manage this group of patients. I do not recommend smaller projects as an alternative such as filtration/purification systems in the water tanks simply because they are wasteful and expensive to maintain but also because they only cater to a select group of patients suffering from infectious disease but not to the wider group of patients suffering from osteoarthritis or needing gynaecological attention.

From a personal account, this has been a fantastic experience all round. I learnt skills and knowledge that I will carry with me lifelong in my medical career and I have to graciously thank the doctors at the camp for their time and patience. As Nepal Trek coordinator for Bristol RAG 2012, I will certainly be strongly advertising and promoting this trip to medical students (or students interested in medicine) of all years as I believe they will have a fantastic opportunity to enforce their interest in medicine by immersing themselves in healthcare in a completely different backdrop to the one in the UK. Many thanks to all those involved and I hope that you continue to run these camps for years to come.

Asef Zahed

Intercalating medical student & Nepal trek coordinator 2012 (Bristol RAG)

University of Bristol

UK