MOUNTAIN MEDICINE SOCIETY OF NEPAL

NEWSLETTER

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EDITOR'S NOTE

Things are changing, and changing for good. The year 2017 saw the Government of Nepal introduce a Bachelors program in Mountaineering Studies, highlighting the obvious need of knowledgeable manpower to make our Mountains safer. More young Nepali medicos are getting interested in high altitude medicine. The Mountain Medicine Society of Nepal now forms a cohort of not only those interested in the diseases of the mountains, but also of those inclined more towards research.

In the 15 years post establishment, MMSN has seen a lot of positives. The Nepalese Diploma in Mountain Medicine (NepDiMM) is into its fifth installment, the latest one being held in 2017. Young doctors from MMSN continue to contribute to (and gain experience from) the annual Gosainkunda health camp, Everest ER, trail races and first aid training programs for high altitude porters and guides. Continuity is being provided to MMSN outdoor activities and journal clubs. MMSN collaborated in the organization of the 10th Anniversary Caudwell Xtreme Everest Conference in 2017, and the XII World Congress on Mountain Medicine is all set to be held in November 2018. This is a pretty hefty list of activities done the year round. But more importantly, MMSN has changed the attitude of individuals involved in it. First year medical students now know the value and basis of *slow ascent, fast descent* and take along *Diamox* tablets with them while on a trek. Porters who have been trained by MMSN are familiar with the rules of acclimatization at high altitude and are ready to provide first aid, if the need may arise. These changes seem even more heartening.

Editing this newsletter has been a delight. It came in as an exciting opportunity when Dr. Sanjeeb (Chief Editor of the previous two editions of the newsletter) asked me whether I could take on this responsibility. I knew it would be a challenge, but gleefully accepted it. After all, the 12th edition was going to be special, for it would be published just ahead of the coveted 12th edition of the World Congress on Mountain Medicine taking place for the first time in Nepal. As our president Dr. Basnyat so often says, '*the devil lies in the detail*', indulging in the articles in depth, first hand, was like travelling on an unmapped road. The articles featured are varied in category and serve the readers with experiences, perspectives and compilations from a noteworthy list of authors. The editorial team hopes that you enjoy reading this issue and welcomes any feedback or suggestions.

Dr. Samriddha Raj Pant
Chief Editor, MMSN Newsletter 2018

EDITORIAL BOARD

Message from the President

Buddha Basnyat

Namaskar,

Welcome to this Twelfth Congress on Mountain Medicine in the heart of the Himalayas in Kathmandu, Nepal. We are overjoyed that you have found time to participate in what will be a magnificent Congress.

It is always a pleasure to write for the Mountain Medicine of Society of Nepal (MMSN) newsletter, although I have been slack in not handing this assignment more promptly this time. In May 2018, it was great to be in Phoenix, Arizona to attend the America Nepal Medical Foundation (ANMF) annual meeting. It was wonderful to meet up with young doctors such as Ganesh Chaudhary, Bhupesh Khadka and many others whom I had taught physiology to many years ago. It felt like a re-union of sorts. In that meeting with them in Phoenix, I felt like I was back in the physiology class in the Institute of Medicine (IOM), Maharajgung, teaching them, and time had stood still.

One of the things besides teaching physiology (which I did on and off for almost 20 years at IOM) is the journal club we continue to conduct at the IOM for the MMSN. There has been active participation by the MMSN members over a decade and a half, and we will continue this important feature (journal club) of the MMSN. I had seen journal clubs being very effective as an enjoyable teaching tool both in Calgary, Canada and Phoenix, Arizona where I studied. So, with eager students hungry for knowledge in the MMSN, it was only a question of engaging them. I made it clear from the outset that the purpose of our journal club was to be critical of the article in question and to try to "disrupt" the conclusions in the paper based on sound rationale. I felt that these brainy, motivated students in the MMSN had spent enough time rote learning, and that it was time to move on from " five causes of this and eight causes of that" (useful as these may be for exams) to checking out if the methodology in the article was intact and thinking outside the box and asking questions.

As a mentor, this emphasis on being critical, which the MMSN journal club attendees have wholeheartedly adopted, has been very rewarding for me. And they have also found that it really prepared them to think differently. In fact we state that the purpose of discussing the article in the club is not necessarily to learn something new about the science of mountain medicine (although this could be a by-product), the main aim is to find flaws in the article. Our South Asian education puts little faith in trying to think independently in a critical way, and I wanted to change this attitude as much as possible. I hope we have succeeded in this to some degree even as we continue these journal clubs in the same vein. In addition the journal club has also given an opportunity to help teach the participants how to give an effective presentation. Simple, obvious things like proper preparation of the power point (for example, not having too fancy or busy slides), speaking loud enough and not being hurried in your presentation. Above all, sticking to time and not speaking over our allotted time. In Nepal, besides politicians, doctors are notorious for not sticking to time during talks. In a small way the MMSN journal club is trying to rectify this amongst the young doctors. We have also tried to stress to the journal club members that the questions from the audience should not become a long speech, like a parallel talk which is characteristic in Nepali doctor meetings. In most instances just one clear question should be allowed from the audience in deference to others who may want to ask questions too but because of time constraints do not get a chance.

One of the challenges we face regarding our habit of almost exclusively learning by rote has come up during the field activities of our DiMM (Diploma in Mountain Medicine) course. When scenarios are enacted in a field situation (for example, handling a trauma case in the wilderness, treating a heart attack or an anxiety attack in the wilderness in a methodical manner), these are very practical situations where we cannot just give theoretical answers and deal with the problem. We have to improvise and think on our feet. Many of the Nepali participants (in contrast to the western participants) in the DiMM course found this scenario part of the course very difficult, to start with. But once they got to know how to tackle the scenario, this portion of the DiMM course became hugely attractive for the Nepali participants, so much so that many participants have tried to apply this "scenario method" from the DiMM course in their own emergency room set up in their hospitals where protocols are seldom followed.

As usual one of the things I continue to harp on over the years is for my younger colleagues to write in medical journals starting with letters to the editor or simple case reports. (No need to wait for a large randomized controlled trial to come along to get involved). I am happy that some have taken this to heart and have started publishing, including in the BMJ Case Reports. I wish more would follow suit so that they could truly feel the thrill from publishing and simultaneously benefit from the clear thinking, discipline, and patience that is required to publish in a good scientific journal today. But all in all, the health of our MMSN is robust even as the youthful members of our MMSN have enthusiastically and wholeheartedly dedicated themselves to the grand success of this World Congress in the heart of the Himalayas. I want to thank the MMSN members for continuing to allow me to serve them. *Jai Hos*.

Dr. Buddha Basnyat,

President, MMSN.

Spreading the Wings: The Next Phase for MMSN

Suvash Dawadi

In a nation with the highest mountains in the world, the establishment of Mountain Medicine Society of Nepal helped in introducing high altitude medicine to young doctors and medical students. Ever since its inception, even with meager resources, MMSN strived for academic excellence, providing opportunities to those interested in expanding their horizon. Through the numerous Journal Club Presentations and seminars by experts from around the world MMSN delved into topics that were considered not so important in Nepali medical school curriculum. Research, analyzing journal articles, collaborating with authors from around the world to get first-hand experience was just a start to the journey that MMSN has been on all these years. With increasing members and an ever-expanding adventure tourism market in Nepal, the role of MMSN was set to grow. The collaboration with the Himalayan Rescue Association to provide volunteer doctors for the Health Camp at Gosainkunda on Janai Purnima was another stepping stone. It provided a great platform for young doctors to experience high altitude at work and to serve the pilgrims who were affected by high altitude. The temporary camp at 4200m became the first time most of us saw how important high-altitude medicine was for a nation like Nepal, for trekkers and locals. And now since 2011, every spring, MMSN doctors are also volunteering at the Everest ER (5300m) for 2 months looking after climbers, trekkers and the entire support staff.

Through tremendous hard work, MMSN was able to start an internationally accredited Diploma in Mountain Medicine, which till date has completed 6 batches with graduates now working on commercial expeditions, endurance sport events and continuing to volunteer at high altitude aid posts. MMSN has also taken upon itself to successfully organize conferences like two editions of Bugs, Bites and Altitude, the recent Extreme Everest Meeting and now hopes to add a feather in the cap by organizing the XII ISMM World Congress on Mountain Medicine. Through these works, MMSN has helped young doctors acquire skill sets that are not necessarily considered must haves in contemporary medical training. One might wonder what's next for MMSN. The first thing from my point of view is to continue all the good work that's already in place. Then, there is still the dream of establishing a critical mass of doctors passionate and trained in Mountain Medicine to provide quality service to tourists and locals in these high-altitude settings. To achieve these goals, MMSN needs to spread its wings. We need to spread the information about the importance of being aware about medical problems at high altitude to all medical students and young doctors in the country. We need to make efforts to increase the visibility of high-altitude physiology and medicine into medical school curriculum, where it now sits as a neglected chapter. We need to make the medical fraternity of Nepal realize that it is in our benefit to better ourselves in understanding and dealing with medical problems at high altitude, because so long as the mountains exist we will get people going there, and they invariably have various medical issues. For this, we need to inspire research into high altitude, and expand our knowledge. And then, there is another important role for MMSN; to provide proper training to workers going to high altitude. Mountain guides, trekking guides and leaders all go through various training as part of necessary certification before plying their trade. These training modules all contain first aid and high-altitude medicine basics as an essential part.

You do see guides carry medical kits with decent inventory of medicine. The problem lies in properly using those medications and practical application of the first aid skills. So, MMSN can help with training the high-altitude workers better as the doctors here know the difficulties of working in a remote location with meagre resources in high altitude. We are bound to better relate to the issues that these workers might have to deal with. In my brief experience in dealing with medical training for guides, that does make a big difference.

Tribhuwan University has recently launched a 4-year Bachelors in Mountain Studies, and this might be a good platform for MMSN to start with increasing the importance of having suitable trainers looking at Altitude Illness and first aid sections of the curriculum. If we can better train our high-altitude workers, they can manage minor medical issues and identify serious illnesses, and this might help bring down the number of avoidable helicopter evacuations that have garnered much attention recently.

As an MMSN member, I am very hopeful that we will be able to make headway into all these issues, and that MMSN will be at the forefront of High-Altitude Medicine in Nepal. Dream on!

Dr. Suvash Dawadi

MDGPEM, DiMM

Upper Mustang: Go Now!

Suman Acharya

It was my third day in Lo-manthang, the ancient walled city of upper Mustang. I woke up early and remembered what Richard had told me the previous day, "Hey doc, make sure you check out Konchomling tomorrow. The place of sky burial." I had heard a lot about Chhosar but Konchomling? I had never heard of that place before. The idea of witnessing sky burial thrilled me. Later, I came to know of it

as a Tibetan culture wherein, when someone dies in the region, the dead body is carried to a place, where the Lama gurus perform rituals, chop the dead body into pieces and feed them to the birds. Konchomling was one such place.

I was in Mustang with the Trail Race 2018 team. It was the fourth race-day and a twenty-seven-kilometers-long stretch of trail, from Lo-manthang to Chhosar via Konchomling and back to Lo, lay in front of us. When I got out of my room, everyone was already in the dining, having their breakfast and getting ready for the big day. Everyone, except the Kitchen Crew, looked stressed out. The Kitchen Crew looked relaxed that day. They wouldn't need to pack and carry the supplies to the next finishing point, as everyone would return back to Lo in the evening. I put on some sunscreen, grabbed my lunch pack, checked my day medical pack and hit the trail half an hour earlier than others. I headed north. 'Koralanaka' was there somewhere, waiting for me, beyond a couple of hills.

As I was walking, I started musing about the last couple of days we had spent in this amazing mountainous desertland - Mustang. Jomsom to Kagbeni had been a difficult walk. We had taken an alternate route to avoid motor vehicles. The next day had been pretty good but on the third day we had had to cover a lot of distance and I had traveled half of the way in Jeep. That had been a really bad day! I was all covered in dust when I had reached Ghami. The next day, while the team ran from Ghami to Lo-manthang, I had travelled in a Jeep along with other staffs. Later, I regretted not walking that day as I missed out on visiting the famous Nagi Gumba and walking through the beautiful High Pass.

Only half an hour had passed since I had left Lo-manthang when I saw a racer coming toward me. I recognized her, Sunmaya. She had outraced everyone in the earlier stages. I tried to match her stride, but boy did I fail miserably. I completely ran out of breath so I sat for a while. Mira, Alex and Mahesh followed and I cheered them as they passed by.

Once again, I was captivated by the beauty of upper Mustang. Down to its core, it was a land of sand, a desert through and through, and yet it was so, so beautiful. Wherever I went, mesmerizing sandy landscapes, created by deposition of sand blown by the fierce wind of Upper Mustang, stood in front of me. Every mountain was the same – a huge heap of sand - yet each seemed different than the other. Every day I got to see something new and different. I hoped my eyes would get to savour something similar that day, too.

I walked by and passed through another village where few children were playing on the road. They greeted me 'Namaste' and I did the same. I thought of the previous day as I continued on the trail. It was our second day on Lo-manthang and it was marked rest day on our schedule. We had been hoping for a quiet day but fate had something else in store for all of us. I woke up at five in the morning to a medical call. Mark's wife was at my door, worried. Mark was sick. I immediately examined him and it didn't take long to see that Mark was having High Altitude Cerebral Edema. I told Richard, the race organizer, that Mark needed immediate evacuation. It turned out to be a very busy morning. We had to pull a lot of strings to make the evacuation possible. Nepali bureaucracy once again reminded us of its ineffectiveness. Nonetheless, we were able to rescue him to Pokhara and he improved.

I was the last one to reach Konchomling. I saw that some runners had already left for Chhosar but the majority was still there, staying for a lot longer than they usually did. And it didn't take me long to figure out why. The beauty of that place completely spellbound me, too. It was the most beautiful desert-island. Yet again, it was just another heap of sands but the whole place looked as though an elite sculptor had carved it out of sandstone. When my eyes were done savouring all they could, I looked around for the site of sky burial. I had no difficulty identifying it as it was littered with human bones. On the other side, there was a cave. It looked hundreds of years old. Some walls had Tibetan paintings made on them while others were all smeared with soot, suggesting that people had lived in those caves. I left Konchomling and headed to Chhosar. I was way past Konchomling and was being greeted by amazing landscapes but my mind still lingered on the magnificence of Konchomling. I had never been so captivated before. I used to think that nothing could beat the sight of a luscious green mountain but how wrong was I. Konchomling changed that perception forever.

Chhosar was another popular destination for the tourists, its main attraction a huge, multistoried cave with lots of rooms burrowed into a hill. Looking from outside, it was difficult for me to guess the size of the cave. I started climbing up the cave with one of the Race staff members. There were just so many rooms that I lost count. Some of the rooms had beautiful Tibetan paintings on their walls and some had their roofs covered with black smoke. It was obvious that it used to be a communal house. We observed the Chhosar village from its window for a while, then climbed down the cave.

We started our trek back to Lo-manthang. Lo-manthang had been the capital of the former kingdom of Lo (Mustang). It had served as a fortress to keep off the Chinese. For a long time, its lands had remained forbidden to outsiders. Foreigners were permitted entry only after 1991 and still they were granted only limited access. Apparently, the place had been kept from the foreigners to preserve the Tibetan culture. Sadly, the former royal palace was destroyed by earthquake and was yet to be reconstructed. We couldn't visit the residence of "Mustangi Raja". However, the three popular monasteries of Lo were open despite being partly damaged by earthquake. Thubchen Gumba was the most popular of the three, and we learned from a monk that it had been built probably during the fifteenth century. It was dark inside and there were no

lights so we had to use our phone's light to see around. But what we saw on the walls had us holding our breath. There were massive, exquisitely detailed Tibetan paintings on the muddy walls. But as I got closer to have a better look, I was saddened. Such extraordinary artworks had been ravaged by time and climate. They were starting to fade and nobody seemed to care to preserve them. But when I learned that a guy from Germany, named Luigi Feini, had been putting all his efforts since 1999 to restore the paintings, I heaved a sigh of relief.

Upper Mustang is still considered the place where Tibetan culture is best preserved. However, western influences are looming large. The road to 'Korala Naka' is being constructed at a rapid pace. It is obvious that the influence is only going to get bigger. Now is the time to visit Upper Mustang if you want to get an authentic taste of its culture and enjoy its raw, natural beauty. So, get your backpack ready and do not forget to visit one place in particular - Konchomling!

Dr. Suman Acharya

MBBS, DiMM.

A Page from my EBC Trek Diary

Subarna Adhikari

24 April, 2018

Willie Benegas and his young climber son Matt turned up in our dining tent while we were still having breakfast. Brent had gotten up earlier today as he was expecting them. I, however, had not even prepared my backpack and was still dressed in my warm clothes because I assumed that we still had enough time for the hike which was supposed to start at around nine. Feeling obliged to join my peers in the clinic tent; I went in to help Brent and Dawa draw blood samples of the Benegases for their research. Amidst the friendly chat, Brent went ahead and drew some 11ml from Willie's arm. He then gestured me to go ahead with drawing Matt's blood. As unwilling as I was to do it, I had to move forward because the situation seemed to demand that. It had been quite some time since I put a needle in a vein. However, Matt was a young man and young men had good veins. I had seldom actually failed to draw blood from veins during my active years. So I went ahead with confidence. I did fail on the first attempt and Matt looked not very happy. I must have caused him pain by piercing right through the vein. The second attempt, however, worked fine and I drew some 11ml of blood. It did make me sad that I missed a vein but rather than feeling worse about having failed, I felt better for having tried.

Before I was done drawing blood completely, Lakpa daai (HRA) walked into the clinic to remind me that the rest of the team was waiting only for me to start the Pumori hike. I ran down only to see that everyone else was ready to go and I was the one causing delay. Completely embarrassed, I asked Lakpa Rangdu Dai (our main guide) for five minutes, prepared my backpack, changed into light clothes, relieved my bladder, picked up my walking pole and grabbed some snacks from the kitchen. It must have taken less than five minutes but I was short of breath by the end of all this. I apologized to everyone for the delay and then we set off. We took the path directly across our camp, into SPCC, through the Pioneer adventure camp and descended directly onto the trail that ran parallel to the molten and frozen components of the glacier. Towards the East lay the gigantic Khumbu icefall straddled by the magnificent Nuptse and Lho la (Everest West Shoulder). Directly beneath that is towards the West was the river-like formation of ice. As the glacier shifted slowly but steadily, the huge mass of ice would break into several small fragments forming structures that looked like baby-mountains. Those ice blocks formed a very good site for practicing ice-climbing for Sherpas and mountaineering beginners before setting foot upon the notorious Khumbu icefall which formed the most conventional route to the Everest from the Southern side.

I have a few personal strategies to keep myself from being a nuisance on a group hike. I try to remain as close to the front of the group as I can, so that I do not lag behind and become the reason for the ultimate late arrival of the group at the destination. This also allows me to catch a breath as the front pack arrives the resting spot waiting for the rest of the group to catch up. I usually take slow steps, keeping my breath, dressed just enough to keep myself warm enough while not sweating within. This can be tricky in the higher Himalayan trails here one has to fend the harsh winds while avoiding getting too warm from the stronger sun rays penetrating through thin air. Thus as in every trek, I was walking just behind Lakpa dai, our lead guide, as he led the party. As we walked along the bank of the glacier (parts of which were molten and flowing like a river due to the increasing heat), I mentioned the Benegas brothers to him. He recalled that Willie and Damian Benegas had come into highlight after they had climbed the Nuptse by setting up Alpine style multi-pitch climbing all by themselves in 2003. They had always been a balanced and successful climbing expedition team. Damian's physique had not reached the Everest standards yet; Willie however looked super-fit despite his increasing age.

Behind me walked Bradley, the tall disciplined Australian from Perth who was going to climb Ama Dablam but was in EBC for a few days in order to acclimatize himself prior to his attempt to scale the mother of mountains.

Courtesy: Dr. Subarna Adhikari

Closely behind, walking in firm steps was Peter, a Swedish climber who had come for his second attempt to Everest, having had to come down from Camp 2 last year because of pneumonia. Behind him Bipin, a Buddha Air engineer who had come for the Everest Marathon last year, trotted. He had decided then that he wanted to climb Everest. There were two other Jangbus closely behind, one of them was Bradley's guide and the other was Bipin's guide for the Everest summit. This formed our complete party for the hike to Pumori high camp.

Around midway, the second generation Indian Canadian Neal Kushwaha, who was climbing with Summit Climb waved to us. When he learnt that we were climbing to the Pumori high camp, he informed that we would be seeing a tent on the hilltop when we reached our expected site. I noticed that he was drinking from his Nalgene as always and also that he had a voice of a person about to develop a nasty Khumbu pharyngitis. Some porters fetching water walked past us as we slowly walked past the Adventure Consultants camp on our right. That was the expedition that carried the legacy of a great climber and a well-renowned guide Rob Hall who had passed away in an unfortunate disaster in the Everest in 1996. I had just finished reading a book that described the disaster in great detail and every time I thought of Adventure Consultants, the twenty two year old event dwelled in my mind as fresh as if it had happened in recent times. An equally famous team was Mountain Madness, whose founder Scott Fisher had died in the same disaster. They had camped further beyond our own camp in the opposite direction.

Having been in the Everest Base Camp for more than two weeks now, the zero point of the Base Camp felt much closer now than it had appeared before. We approached the camp of Asian trek within under half an hour. They had three components one of which was the climbing team of the border security force (BSF) of neighboring India. We had met their team doctor before and had also learnt that they had brought a huge supply of medicine and instruments, some of which was redundant (including anti rabies vaccine and anti-snake venom) in the Khumbu. There stood a signboard in Nepali in front of their camp that read "we provide free consultation and medicine to Nepali brothers and sisters". Ben Clark, an old friend and mentor was the expedition manager and the team doctor for one of the other sections of the same camp.

We walked past them to the "Trekker's rock" which was supposedly the turnaround point for all trekkers. Despite the convention, many trekkers kept walking past the trekkers rock and some did arrive all the way to our clinic to pay us a visit. It was interesting to see how the number of trekkers paying us a visit for consultations rose significantly this year compared to previous years. Because it was still early in the day, not many trekkers had arrived and that made the Trekker's rock and the helipad unusually quiet.

The route to Everest Base Camp from the ridge that came up from Gorak Shep had shortened significantly since the day we had first arrived. However, our lead guide Lakpa daai (or Achu Lakpa as the Sherpas would say it) took us through the conventional roundabout into the meandering traces of a trail that comprised of mostly boulders. As Peter and Bradley closely followed Lakpa, I remained closely behind them trying to trace their firm, trained steps. I did keep handing over my walking poles to Bipin, so that I could fiddle inside my hastily packed backpack to find the most suitable clothing for the overall good weather; the occasional the Himalayan breeze was an uninvited yet appreciated change.

Achu Lakpa was a conditioned mountaineer. He had summit records that stood at teens which meant that there were no frequent layering, drinking breaks and breath-catching stops. He carried us forward as if we were a climbing regiment. He did tell us to look back towards the East where the dark gigantic peak was beginning to show its parts behind the shiny white West Shoulder. It was interesting to learn that traditionally people had tried to climb the Everest along the route of Khumbutse, LhoLa pass, along the western shoulder and then onto the higher camps several times. That was apparently in an attempt to find an alternative route to the notorious Khumbu icefall, which was the first hallmark of the conventional southern approach. Nevertheless, all such attempts involving Lho La and the Western shoulder had failed. I was not surprised at all because the brief time spent at base camp was enough to

learn that Western shoulder and Lho La were angriest among the ridges surrounding EBC. At least one or two avalanches of varying intensities came down every day or night. The icefall, however, lay mostly away from the Western shoulder and was closer towards Nuptse most of the time which was why the route had been labeled the safest this year. Although Nuptse is also an angry goddess because it lies mostly away from the Western shoulder and is closer towards Nuptse most of the time throwing down huge piles of ice on and off, she is relatively more placid compared to the ferocious Western Shoulder.

We then reached a relatively flat area, and I thought that it was towards the end of the climb. Achu Lakpa, however, kept going and so did Brad and Peter. Bipin and both the Achu Zangbus remained behind to form the bulk of the second half of the group. I asked them if we were to climb the wall of rock that lay in front of us. I smiled as they nodded because there seemed to be no way through the wall and it looked absolutely vertical. One of them asked me if I was already too tired to keep going. I was not; it was just the challenge of the climb before me. Such is the usual nature of high mountain ridges that a narrow trail meanders through a daunting vertical face and one has to slowly make way through it, slipping on the scree, finding one's balance, and not looking so much at the destination ahead as at the path beneath. A relatively sunny weather, gentle breeze, a calm and patient temperament, good hydration and the right amount of layers helps keep the climber going, a lone walker in a group.

Luckily, our first stop was before the steep scary ascent. We layered up, drank some water and stared back at the enormous shape of Mt Everest slowly appearing behind the Western shoulder. From down below at the base camp, one cannot see any part of the real Mt Everest. One cannot help marveling the trick of nature whereby a ridge almost a thousand sand meters shorter can completely obscure the higher, mightier actual peak. I had read somewhere, or perhaps someone had said that, "For every big mountain you climb, you realize that there are many more to climb." Ironically, an Everest climber could proudly say 'I have climbed the highest peak and there is nowhere on earth that you can go and claim to be higher than I have been to.' One more interesting aspect of Everest or mountaineering entirely is that people come up with ways to do something new on the same mountain every year; something that none has ever done before. My innocent opinion is that setting your foot upon Khumbu and embarking on a journey to Chomolungma (the Tibetan name for the Everest) makes you among the chosen few thousands and reaching the summit makes you one among the extraordinary few hundreds. That is in itself a great achievement even without any extra accolades of being either the fastest, scariest, tallest or shortest climber that ever reached the peak of the Everest.

I was walking fine, at least keeping pace with my Nepali climber friend who had damned all the rules we knew about climbing and appeared at the base camp one evening without so much as a prior knowledge on mountaineering. His sense of ease misled even me for a while and I told myself maybe I can attempt it myself someday. That was about the point when we met our first snow of the climb. The slope had abruptly steepened, and the wind grew harsher. I donned the sturdiest layer I had and pulled up my buff. I had caught a sore throat the very next day after arriving at the base camp. However, it had vanished instantly following a warm saline gargle. It had started troubling me again for the last couple of days, making it hard to breath at night and whenever temperature plummeted. For a while my buff kept me from getting my throat any drier and hence more congested. As we started ascending higher, I started getting short of breath more frequently and kept taking off my buff due to the air hunger. The harsh, cold and dry air singed through my already congested pharynx and felt as though it were causing all my little airways to collapse in response as it went deeper. I recalled how my wife had faced the "buff-on or buff-off?" paradox when we had trekked up the notorious Khang La several months back. The only difference was that the altitude at the beginning point today was the altitude that is the highest when you trek to the Khang La.

I felt hungry but did not want to eat. I started getting a sick rumbling in my tummy. I felt thirsty but my throat warned me not to attempt to swallow anything. I could no more keep myself towards the front of the group and fell behind with Bipin who took as many stops as I did. The higher we ascended, the more frequent the stops became. Although I was no mountaineer myself, I kept wondering how this young man who smoked at least two to three cigarettes every day was going to summit Everest on his first ever attempt on any mountain. Secretly, we all thought that Bipin would fail but we never told him. Honestly though, I had more regards for his guts and indifferent courage. I would be pleased if a Nepali amateur non-Sherpa accomplished that feat by defying all established norms of mountaineering. Compared to him, I was feeling lucky that my highest climb this season was going to be over in a few hours as I slowly decided that mountain climbing is an enormous challenge and I was in no shape yet to even think about it. I would need to build patience, stamina and aptitude besides skills and technical knowledge before I could even think of attempting. The only other thing that had made me feel this petty is being at the sea for the first time in my life. My short journey of life has taken me from the tropical shores of the Indian Ocean to the highest region on the Earth in less than a year. Deep breaths is the usual trick to restore your nerves but there, even the deepest and most relaxed of breaths did not have any effect because of the inherent cold irritant property of the air.

Lakpa Rangdu, Peter and Brad kept going steadily ahead of us without stopping even once. The two other Jangbus also walked beside us, appearing abruptly out of nowhere to comfort and encourage whenever the

two of us sat down to rest.

Just before the final push, we had one stop that overlooked the steep valley beneath. I was very tired when we reached there. One wrong step and one would meet his ultimate doom. A lone trekker with a pair of faded shorts and a sun hat walked past us saying hello. Our breath was just enough to greet him back; we lacked the energy and spirits to ask him anything more. We wondered why anyone would come trekking at the desolate chilly windy mountain desert on a day like this. Jangbus popped up out of nowhere and hushed us while making small conversations. Bipin's guide Jangbu asked me if I wanted to try climbing Mt. Everest next year. By that time, my inflated ego which had earlier told me that I could really do it, had found its rightful place and I was experiencing the limits of my physical tolerance. I managed to wheeze a sentence out of my labored breath, "I will need at least ten more years to prepare for that." It might have offended Bipin who was looking forward to summit Everest on his first ever mountain attempt. I had already had my reality check and got my limits tested, at least for the time being. At that moment, I really believed that it would take me at least ten years of stamina building and technical preparations for sheer will power and florid imaginations; those being probably necessary were not adequate to reach the top of the world.

The mighty Pumori lay towards our right. We walked past a tent perched on a clearing amidst the scree and thought that it was probably where our trekker in shorts must have been going to, and must be resting in now. I recalled what Neal had said earlier and realized that we must be close to the end of our climb. As we approached the spot where the rest of the team was waiting for us, we heard an ominous rumbling of an avalanche that shook our hearts. The relaxed faces of our experienced guides, however, reassured me. While avalanches in the Pumori are an everyday routine, this one sounded alarmingly close. As we caught our breath, AchuLakpaRangdu explained to us the course of the destructive avalanche of 2015. It arose from Pumori and had wreaked havoc upon the Everest Base camp. Peter said to me, "Good job, doc." and Brad gave me a fist bump because I kept my calm even while the sound of the avalanche rung in our ears. It was then time to breathe, get warm, drink and think. We could see the peak of Mt Pumori and two ropes dangling down. From where we were sitting, we could see the trail of footprints on the snow going all the way up (likely to the top). The distance from our spot to the spot where the footprints on snow started was more than the distance we had walked today from the Base Camp. I sneaked a peek into Brad's altimeter and it read "Tue Apr 24 1147 ALT 5759m". We had gained about 400m in about three hours and this was going to be my highest altitude achieved for a long time to come. That was what kept ringing through my ears as I listened passionately to Achu Lakpa, who point out the now visible Camp 1, Western CWM, Camp 3, South Col, Geneva Spur, South Western ridge and the trail to the South Summit (although not necessarily in this order) to us. He told us that the main summit was still further towards the north, a daunting walk from the South Summit. I asked him a question that had been bothering me all that while, "Is it possible for summiteers from the North to meet those from the South at the summit of the Everest?" Interestingly, it turned out that it was possible.

Lakpa gave us about forty five minutes to hang around, release and restore ourselves, eat a little and mostly rest. I was not very worried about the upcoming walk because I knew the tricks of walking down the slope which would form a third of our climb down; the rest of it would be rocky dusty trail. However, the wind was growing harsher and the clouds were rolling in as the day moved into the afternoon. It probably took us about an hour and a half to reach the same height as the base camp while descending, but the change in weather was almost drastic. When we took our only break on the descent, we had just trodden along a very rocky trail (different from what we took in the morning) and were very exhausted. We ran out of water and food and I still felt hungry. Our camp was about forty five minutes away and we were hoping to make it back to the camp before it became really cold or it started to snow. We finally crossed over to the zero point (trekkers' rock) on the other side to see what seemed like a circus, come to life. There was a huge crowd of trekkers of all shapes and sizes that looked like a flock of exotic birds that had just flown in and were happily chattering in different languages. Nobody was assigned the responsibility of keeping this crowd under control and as a result they went about breaking norms and conventions, littering and defiling the place, unchecked and unabashed.

As we walked further, I saw Ben Clark lurking about on the trail all by himself. I waved at him and said hello, for otherwise he would have walked past me without recognizing me. That hello was what I remember as one of the biggest mistakes of my life. We were still about 35 minute walk away from our camp, and this was only the second time that I was away from the camp. The glacier is a treacherous shape-shifting goddess who modifies the human-made trails on a daily basis and new camps pop up every day around the trail. I was hungry, tired, and dehydrated. The weather was closing in on us and it was going to snow very soon. Added to that I was very poor with directions and navigations and god forbid if I was separated from my group, I would not be able to find my way back to our camp. However, I was being the gullible former student that I was, I agreed to help him (despite all odds against it) to find the camp of the guy who used to fix internet in the EBC. As the rest of my pack walked into the cozy comforts of our camp, I roamed about with Ben Clark across camps using the most traditional technique of finding the whereabouts of a person - asking around. We, or rather I, found the camp, the guy's tent and his number, but we could not find him. The wild goose chase ended when Ben thanked me and left abruptly for his camp. I set off in the direction of my

camp but it started snowing heavily. As exhausted as I was, I started also becoming angry for allowing myself to be used this. Mixed with fury, fatigue and fear of getting lost I tried to keep as close to the camps as possible for I felt I was on the verge of passing out and I wanted someone to see me in case I did. Even though my mind was functioning at an optimum, I started reaching blind ends and walking in circles and it did take a lot of asking around before I could be sure I was walking in the right direction. Meanwhile, the snowfall got heavier and I started getting colder despite my adequate gear. I felt vulnerable, like a lone wolf separated from the rest of the pack. In a state of confusion, it took me twice as long as it would have normally taken to reach our camp site.

When I did reach there, Brad was sitting in our mess tent. The gentleman that he is, he offered me a hot lemon drink and gave me some chocolates for instant energy. I had barely survived, and sometime later I had some candies to refuel my blood glucose. I managed to avoid talking to a reporter who visited our clinic in the afternoon. I was exhausted but I still started brooding upon my lesson for the day. The final outcome of my thought process was that I was proud enough to have had survived that day just to tell the tale of my little adventure.

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Those Twenty Four Hours at Gosaikunda.....

Badri Aryal

9th Bhadra 2075, Gosaikunda.

It was the fourth day of our health camp. As usual, we woke up early in our lodge “Hotel Peaceful Lake” just to appreciate the clear weather of Gosaikunda. After having some warm water and tea, we all prepared to reach the camp. It was just 7:30 am but we were already in a hurry because we knew that we would have to look after a greater number of patients that day. We had anticipated a larger number of patients compared to other days but what we faced in the following 24 hours was much beyond our expectations. Personally, I had never felt as responsible a doctor ever before as I did in those 24 hours.

We had set our camp in a Trust building near the temple which was some fifty meters from the lake. The temple premises had a different charm that day. The number of people had significantly increased and the number of ringing bells had too. There were shopkeepers who sold puja materials and coconut. They probably knew that they would have some good sale that day. The lake was dark and deep, reflecting the majestic mountains. Some people said that they saw lord Shiva sleeping in the lake and we comically provided the medical rationale behind it - illusion. The same morning, we had one more reason to be happy. The earlier day we had treated an eighty-nine years old uncle who had acute exacerbation of COPD. Dexamethasone that was available to us for the treatment of severe AMS/HACE, had been used in the same dose equivalent to prednisolone for the treatment of A/E COPD. He came to us happily, walking easily without any dyspnea unlike the previous day. He watched us attempting to treat another patient, a 50 something year old lady with dehydration secondary to vomiting. We were trying with great difficulty, of course, to locate her vein for getting IV access and beside us was our old uncle who had taken upon the responsibility of counseling the patient. It will be different once you allow your doctors to treat you, he said.

Till noon, the day went pretty smoothly. We had enough patients to remain occupied but there was no crowd. We successfully treated a patient who visited us with shivering after having a dip in the cold holy lake a couple of times. Diagnosing hypothermia in that patient was relatively easy because we had successfully managed a case of hypothermia in a hypothyroid patient the previous day. On measuring the oral temperature of that patient, it came out to be 33°C. We were fortunate enough to have a good quality sleeping bag, a hot water bag, nearby tharpu to supply hot water and IV fluids with IV sets with us. As the patient was shivering from head to toe and with it his arm was too, we had a hard time accessing the IV line. This was one of the tough jobs for us as doctors because in the hospital we just had to instruct and the nurses would do the cannulation making it easy for us. After giving two pints of warm IV fluid and few glasses of warm honey and water, we wrapped the patient in a sleeping bag and blanket with hot water bag inside. The temperature rose gradually and eventually, the patient stopped shivering. We were very delighted when the thermometer read 37. 4°C. The patient was still hyperventilating due to anxiety and we had to give him placebo oxygen at the rate of 0.2 L per minute. I don’t know whether or not the patient felt oxygen coming but it did work for his anxiety.

At around 1 pm in the afternoon, some volunteers from the Red Cross Society, who had set their tent near our camp, came to ask us for some paracetamols and we gave them some. Most of them were 8th and 9th grade students. Initially we thought that they were there to give us a helping hand and one of our team members asked them to assist us in bringing patients to our camp. Surprisingly, they burst into anger and started shouting that they were there to distribute medicines too. When asked what they knew, they told us that they had trained for three days in school and they knew all about prescribing analgesics for headache, antitussives for cough and anti-vomiting drugs for vomiting. We were a little taken aback. I tried counselling some of them that as praiseworthy as

their efforts to help others were, the hazards of giving medicine only on the basis of symptoms were innumerable. Although they were not entirely convinced, I had to leave them at that and attend to the patients the number of whom was increasing rapidly. Later that day and at night, almost all of the presumed "Doctor Kids", who hardly had any knowledge about altitude illness came to us with headache and other symptoms of Acute Mountain Sickness. We did what we had to - counselled and prescribed Diamox. Although we were five doctors, we only had one table to ourselves. With that and the two chairs that were made available to us, we could attend only two patients comfortably at a time. The line, however, grew so quickly that we had to observe several patients at a time. Some of us were sitting on a mat while some others had to sit on a log or a stone and examine the patients. On top of that, it was raining outside which made it although more difficult to shift the line out of the camp. It was still going pretty smoothly until some patients arrived with an emergency and none of us were unoccupied. At the peak hour, a patient who was drowsy had ataxic gait with lakelouise score of 8 arrived. It wasn't a difficult job to give IM dexamethasone to the patient. What was a hard nut to crack was to counsel the patient and the patient party to descend. Their religious faith was etched so deep that people never tried to understand how grave the situation could turn out to be. They were adamant on taking a dip in the holy lake the next morning. Another patient, a teenage girl with several episodes of vomiting arrived and we tried to control her situation with oral Ondansetron. Unfortunately, the patient vomited the drug itself within a minute. The dehydrated patient did not even tolerate ORS which left us with no options other than getting IV access which was a nightmare because she was obese and veins could not be visualised in her limbs. Luckily, we were able to put an IV cannula in her left cubital fossa after a few attempts. With one dose of ondansetron and metoclopramide each, the patient stopped vomiting and her condition improved gradually.

Initially we were observing patients and noting all their details but later we shifted to just writing the name and diagnosis in a table and prescribing medicines. We did not manage to grab lunch at any time. At one point of time, my stomach was burning and I had to pop in one pantoprazole myself. Several more patients came with symptoms of AMS, APD, pneumonia, muscle spasm and other problems. Among them, came another interesting case with history of multiple episodes of vomiting secondary to AMS, and we had to give five pints of IV fluid only to raise the SBP to 100 mmHg.

At 8 pm, we were very exhausted and hungry. It seemed like we had to go through the same situation throughout the night. As much as we were dedicated to serve others, there came a situation when we gave in to our body and realised that we could not do without food and water. We decided to divide our team into two so that we could go for dinner in turns. We still had two patients with ongoing IV fluid and two other patients in line. Luckily, I was in the first team. While we returned to the camp after dinner, the crowd had decreased significantly, the patient who was in shock had stable blood pressure. We finally heaved a sigh of relief. As the night grew colder, our struggles increased. Even though we had brought our sleeping bags, there was no place to sleep. I started sneezing and because my throat was already sore from all the talking that I had to do throughout the day, I immediately took medicines. I felt very happy to be there though - to feel the cold and to look after patients. In the last few days, we saved few lives and helped many others but that night was different. It was something I never had done in my life as a doctor and I had never felt as responsible as I did then. Throughout the night, we tended to different patients with different diagnoses - ranging from mild nasal decongestion to conversion disorders, sleep apnea, and APD. Some patients came just for the delight of getting their BP measured in the middle of the night. One of the army personnel who was sleeping next to our camp suddenly came to us with both hands on his head and fell down. Assuming that it was HACE, we made dexamethasone ready but he quickly regained his consciousness and was well oriented. On interrogating further, we found that he had come all the way from Dhunche to Gosaikunda and had left his evening meal. Suspecting hypoglycemia, we gave him warm water with honey. After half an hour he was able to stand own his own and went to sleep with his friends.

The next morning was Janai Purnima, the much celebrated festival in Gosaikunda. There was a huge crowd of pilgrims who came to take a dip in the holy lake. Just like the transient ripples on the lake, the crowd too would disappear in a couple of hours. Everybody would return. We also managed to go to the lake in turn to have a dip and to have a holy thread in our wrist from panditji. Although, the worship was not as rewarding as it was to treat patients but as they say, when in Rome I had to do as the Romans and I did the same.

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Consensus Guidelines in High Altitude Medicine and Physiology – An Update 2018

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As in every field, the field of high

altitude medicine has its trajectory of the development, research, and maturation. Along the way, we have some critical landmark developments and consensus guidelines. Here, I would like to present a brief overview of those developments in the high altitude medicine and physiology field for the novice readers. The purpose is not to give an exhaustive review but rather present an outline and refer readers to the related references (most of them cited here) for the detailed reading.

Probably, the acute mountain sickness (AMS) scoring criteria were one of the most influential developments in the field of high altitude medicine. The self-administered and straightforward score developed by the researchers and clinicians of the area at the meeting of Hypoxia Symposium in 1991 (Anonymous, 1992), subsequently validated (1991–1993) and finalized in 1993 (Roach et al., 1993) is one of the widely accepted, used and reported AMS score. Since the score was developed during the hypoxia meeting held at Lake Louise of Alberta, Canada; the name comes as Lake Louise Score (LLS) of AMS. Although it does not seem an official consensus committee of International Society of Mountain Medicine (ISMM), the score has been tale-tale adapted and recommended by the society. There were other scores of AMS before LLS such as Environmental Symptom Questionnaire (ESQ) (Sampson et al., 1983) and Hackett Score (Hackett et al., 1976). The ESQ, developed by the US Army Research Institute of Environmental Medicine (USARIEM), has two components related to the altitude illnesses: AMS-Cerebral (ESQ AMS-C) and AMS-Respiratory (ESQ AMS-R). For the AMS assessment, AMS-C is used and the score has some metrics calculation based on its validation questionnaire. AMS-C is rather stringent in the diagnosis of AMS compared to self-administered LLS (Maggiorini et al., 1998). The Hackett score, developed by Dr. Peter Hackett (Altitude Research Center, the University of Colorado at Denver, USA), is more of clinical assessment (to be used by physicians in the field). In fact, LLS seems rather a much simplified version of Hackett score. The development of the AMS score started with a systematic collection of signs and symptoms of AMS or general attitude clinical illnesses in the 1930s and then further consolidated in 1960s. Those works from the 1930s and 1960s have laid the foundation for the development of ESQ, Hackett score and LLS.

The LLS has been criticized for its simplicity and subjective nature by some sections of high altitude medicine researchers. There have been comparison studies/analysis between two scores: LLS and AMS-C. In recent years, the LLS came under real scrutiny for the sleep component in it. Two studies reported that sleep not being a contributing element of AMS in LLS (MacInnis et al., 2013; Hall et al., 2014). Hence, there was a call and discussion among high altitude medicine experts about LLS revision. The debate started in ISMM World Congress (2014) in Bolzano, Italy and the revision has been published in 2018 as "The 2018 Lake Louise Acute Mountain Sickness Score" (Roach et al., 2018). The new 2018 LLS Score does not contain sleep component and all others remain same i.e. scoring protocol and AMS diagnosis criteria. Some of the pertinent questions regarding LLS are still there such as should we have eliminated sleep or weighted in the overall score. Secondly, the LLS has never been systematically translated into other languages such as Spanish, Chinese, Nepali or Hindi. The mountains such as South American Andes, Himalayas, and Tibetan Plateau are inhabited by the population who speak those languages. It is not entirely clear why it has not been emphasized so far. Third, although it has been tentatively assumed that the score cut-off for AMS diagnosis for 2018 LLS (with sleep portion removed) and AMS-C will be similar; it remains to be tested. It will be still interesting to see if they really do. Both of these scores have been developed and used for the research studies even though they do have clinical values as well.

Despite having LLS criteria for the AMS diagnosis, there was a lack of standardized reporting in high altitude medicine research. Due to its field nature or very labor-intensive, costly and cumbersome laboratory (normobaric and hypobaric chamber) studies; the variables, primary/secondary research questions, and reporting vary a lot across the studies (Brugger et al., 2018). The methodologies and study settings vary significantly from study to study. Therefore, it is quite challenging to extrapolate or generalize the results. The lack of consensus guideline in the reporting of high altitude or hypoxia studies made it further difficult. Realizing this gap, the team from Institute of Mountain Emergency Medicine at European Academy of Bolzano (EURAC), Bolzano, Italy lead by current president of ISMM (Prof Dr Hermann Brugger) developed a consensus guideline for clinical high altitude research called STAR (STrengthening Altitude Research) Data Reporting Guideline using a rigorous Delphi method (BrodmannMaeder et al., 2018). The STAR guideline is for the clinical research and has its core and supplement components. However, the components can be core or supplement based on the research questions of a particular research. It is coincidence, most likely, the 2018 LLS and STAR guidelines were developed at the same time and published in the same issue of High Altitude Medicine & Biology. The LLS is a core parameter, and ESQ AMS-C is the supplement parameter in the STAR guideline. The investigators are expected to follow STAR Guidelines and 2018 LLS for the high altitude and hypoxia research.

There are other altitude medicine practice guidelines most significantly, the Wilderness Medical Society (WMS) came up with a team of high altitude experts in clinical medicine and made an up-to-date evidence-based consensus guidelines for the prevention and treatment of acute altitude illnesses developed in 2010 (Luks et al., 2010). The WMS guidelines specifically cover high altitude headache (HAH), acute mountain sickness (AMS), high altitude cerebral

edema (HACE) and high altitude pulmonary edema (HAPE) and it was updated in 2014 (Luks et al., 2014). The guideline has been quite useful for the physicians in the field to manage altitude illnesses with the current evidence. It will be important to update the guideline regularly as new evidences evolve in the field. There have been stream of reports and researches in chronic and subacute high altitude diseases especially from South American Andes and recently from Tibetan Plateau as well. The International Society of Mountain Medicine (ISMM) sixth world congress on mountain medicine and high altitude physiology at Xining, China made a consensus statement on chronic and subacute high altitude diseases (Leon-Velarde et al., 2005). It has not been updated since then and probably, it might be time to update especially with the latest developments from the genetic evidences on high altitude adaptation (Simonson, 2015).

Recently, the Medical Commission of the Union Internationale des Associations d'Alpinisme (UIAA MedCom) has been extremely proactive lately on the consensus guidelines for the high altitude exposure. The UIAA MedCom has made attempts to develop topic specific recommendations for high altitude medicine clinical practices. The consensus statement on the working guidelines in the hypoxic conditions (Kupper et al., 2011), the rationale use and misuse of drugs in the mountains (Donegani et al., 2016) and the latest medical recommendation for the mountaineers, hillwalkers, trekkers, climbers with diabetes (Hillebrandt et al., 2018) are some of the outstanding contributions from UIAA MedCom. I believe the vibrant team of UIAA MedCom will continue produce such works. The European Society of Cardiology and others related societies recently published a comprehensive high altitude clinical recommendations for the individuals with the pre-existing cardiovascular conditions (Parati et al., 2018). The abovementioned guidelines are extremely useful for the prevention and treatment of altitude illnesses, which will reduce mountain mortality (and morbidity) significantly. However, we also need to encourage more original researches on different fronts such as climbers and trekkers with pre-existing conditions and organ transplants, pilgrimages, porters and children. The guidelines will be stronger only when there are evidences with solid original researches.

Similarly, there have been several excellent clinical and pathophysiological seminal reviews from the leaders in the field periodically (Hackett and Roach, 2001; Basnyat and Murdoch, 2003; Wilson et al., 2009; Bartsch and Swenson, 2013; Davis and Hackett, 2017; Luks et al., 2017). Those reviews have really brought original contributions together, consolidated our understandings and shaped the direction of researches time and again. To summarize the overview of those reviews is beyond the scope of this article. It is recommended that the interested readers read cited references and other state-of-the-art reviews (Gilbert-Kawai et al., 2014; West, 2017) for the further details.

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Expedition to Everest – Excerpts from my Life (An Edmund Hillary Autobiography)

Kanchana Bali

Once upon a time, just when the world was recovering from the wraths of First World War, the far away land of New Zealand reverberated a happy cry. Happy because the post-conflict summer of 1919 had finally brought sunshine into the lives of people in Auckland while the cry was that of a newly born child - the Hillary family's own sunshine. My father, Sir Percival Augustus Hillary, was an austere old retired army officer who had taken up beekeeping as his profession. Living with my father meant that my house was a much disciplined abode and when Rex, June, and I tried being a nuisance, we got as many thrashings as the number of bees in our hives! My mother, Gertrude Hillary, was a nurturing old woman whose only wish was for me to excel in grammar. Grammar meant school and for me, school was an entirely different story

My Parents - Percival Augustus Hillary and Gertrude Clark

altogether.

I was an average shy kid. My pale complexion flushed red every time I was asked to stand up in class. I was small compared to children my age, and had self-esteem the size of a peanut. My dreams, however, were paradoxical to my size; I desired big adventures and mountains and Antarctica and long train rides to and from my school. Time passed, and as my shrill voice turned hoarse, my petite body transformed as large as my dreams - I grew 1.98 meters tall! Little did I know then that I would grow taller, much taller than anyone had ever been before, as tall as the highest peak in the world! Not only did I grow vertically, I also developed a strong physique which was because I took up boxing to unleash all the energy that puberty brought in me. It was during those school years that I had my first rendezvous with the mountains. I had gone for a school ski trip to Mt. Ruapehu and there, I felt a lot of things. 'I returned home in a glow of fiery enthusiasm for the sun and the cold and the snow – especially

When I was in the Royal New Zealand Air Force

the snow.'

I secretly always knew that Grammar was not my thing. After two unsuccessful years at the Auckland University College, I joined my father and Rex in our family beekeeping business as a full time beekeeper. Which was a boon in disguise because I would later find out that the heavy work kept me fit, fit enough to be a climber! During the beekeeping years, I read extensively and built convictions and morals that strengthened my grounds as a person. I was always skeptical about the existence of God but that did not prevent me from becoming a compassionate and optimistic human. Beekeping was a demanding job but that did not prevent me from taking short excursions outdoors. My palate then developed a taste for fresh air, serene views, scree ridden trails and heavy backpacks. At the tender age of 21, I made my very first ascent up Mt Ollivier (1,933 metres) on the Sealy Range above Mount Cook village. That day, I was the happiest I had ever been in life.

In the year 1940, I joined the Royal New Zealand Air Force and that brought opportunities for me. I climbed Mt Tapuae-o-Uenuku (in the Inland Kaikōuras) and Mt Taranaki. My climb up Mt. Tapuae-o-Uenuku is a story that I have to share. I climbed alone, and trust me when I say that it was not very easy. The obsession with climbing and my physique, an asset, really help me conquer the 32-kilometre walk up the Awatere Valley, a long tramp up the Hodder River and a 14-hour climb, followed by the Hodder and Awatere walks in reverse – all in a weekend! However, life had other plans for me. I qualified as a navigator and I was posted to the Soloman Islands. This was where I had an ominous experience at the sea. My boat had an accident, I was badly burnt but I was grateful that I was lucky enough to have survived. The war ended, I recovered and I returned home, and then took on my first 3,000 m peaks – Mts MalteBrun and Hamilton in the Southern Alps. From then onwards, there was no looking back.

Although I had started climbing, I was still deficient in technicality and skills needed in an efficient climber. In 1946, in course of looking for a 'Guru', I met Harry Ayres, who was undoubtedly the

most talented mountain guide of our generation. Harry and I clicked instantly, and over the next three summers we climbed several peaks including New Zealand's three highest – Aoraki/Mt Cook, Mt Tasman and Mt Dampier. Harry polished my climbing skills and under his guidance I gained a lot of experience. Our Aoraki/Mt Cook climb was a special one – we successfully climbed the last major virgin southern ridge of the mountain with Sullivan and Adams. In course of time, I met a lot of people who had little but the undying love for mountains in common. One such person was Earle Riddiford.

With my partner!

Earle Riddiford was an ambitious man. He turned out to be that fuel which helped ignite fire in me. He said,'Ed, let's tackle the beasts of the Himalayas.' Riddiford had made his initial ascents in remote parts of the Southern Alps in the late 1940s. Determined to conquer the Himalayas, he recruited George Lowe and Ed Cotter for the expedition. Riddiford then used his legal skills to gain permission to climb in the Garhwal Himalaya of India. Riddiford, Lowe, Cotter and I thus set off for the Himalayas. We started with the Garhwal Himalaya, where we climbed five 6,000 m peaks. Among the other three climbers, I made a great team with Lowe in terms of climbing pace, skill and enthusiasm. Our friendship later went cold, and that story could be saved for some other day. The two of us returned but Riddiford and Cotter managed to summit 7,240-metre Mukut Parbat. Nevermind, let me include that age old story here.

While our Garhwal expedition was still going on, apparently the New Zealand Alpine Club had requested that two New Zealanders join the 1951 Everest reconnaissance expedition that was to be led by Eric Shipton. Now, Riddiford and I were the chosen ones, and that in turn caused Lowe to drift away from my life. My old mate Riddiford and I hurriedly joined Shipton's team in Nepal and headed into the Khumbu region. Our route was via the dangerous and infamous Khumbu icefall and we had but little hopes of reaching the summit. In course of our trail, however, we noticed Pumori from where the way up seemed relatively achievable and we forced a route. This trek was one a milestone because here I met a Sherpa, who would later go on to become the man that I would share the pride of having the first ever humans to summit the highest peak in the world. No cliffhangers (guess which mountain this word originates from), the man was Tenzing Norgay Sherpa.

Let me fast forward a little in time to the year 1953. A lot of things happened that year. Colonel John Hunt replaced Eric Shipton for the Everest Expedition. I knew what being led by a military man would be like, I thought. A lot of strategic planning was done and porters were busy for the longest time taking goods higher up and setting camps. The checklist had three important things – oxygen, food and equipment because Everest was a prize that could not be compromised whatsoever. The feat then began. Above the Khumbu Icefall, George Lowe (time healed even the deepest of wounds) first set up a scree laden route up the steep Lhotse face to Everest's South Col. From there on, Charles Evans and Tom Bourdillon reached the South Summit, but got no further. Trust me when I say that the majestic Himalayas are not merciful. There were many climbers who were as skilled as I was, who had more experience than I did. Many died, many climbers were left helpless and many gave up. We could have lost the battle too. After the south summit, we set off for the peak. I carried 27 kilograms to the final camp and then made our way up. We had acclimatized very well, and Norgay and I made a great team. We thought we were doing fine until we faced a very steep barrier, which the young fellows have now named 'the Hillary Step'. I thought I would die but the universe had better things in store for me. Wrapped up in snow, all I could think of was the fact that I was so close. I knew I couldn't die. With much effort, Norgay and I regained our breath and took the way up to the peak. 29th May 1953, we conquered Mt. Everest!

Well, I am Edmund Percival Hillary, and this was my journey to the top of the world!

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Kanchana Bali,

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A week in the Highlands of Langtang Region

Ramesh Balayar

Our much awaited trip began early morning on 19th of August, when we took a minibus to Dhunche, the headquarters of Rasuwa district, from Machhapokhari, Kathmandu. We were seven people - two medical personnels, an intern doctor and me from Mountain Medicine Society of Nepal and five others from Oxford University Clinical Research Unit (OUCRU) – Nepal. Our relatively smooth journey from Kathmandu turned slippery from Galchi onwards because it had rained the entire night. The smooth drive became more of a roller coaster ride. In course of time, we managed to grab lunch at Bidur, Nuwakot and we had resumed our journey for only about 20 minutes when we met with a surprise. The bridge which was supposed to take us ahead had collapsed the previous night.

"How are we going to continue our expedition in the absence of a bridge?", we wondered.

Nuwakot had lost its transport connection with Rasuwa after heavy rainfall and the flood that followed it damaged the bridge connecting Trishuli-Betrawati section along the PasangLhamu Highway, 1 km away from Trishuli bazaar. There was not even the slightest possibility that we could go ahead via transportation. We were in a dilemma as to what we should do and after a long discussion, we finally decided with a heavy heart that we should move ahead on foot. We carried our bags and the heavy tents weighing almost 50-60 kilograms and made our way towards Dhunche. After traversing the long roads, we were lucky enough to find a Scorpio car on the other side of the collapsed bridge and after failed bargainings and empty pockets, we began yet another journey.

Although we were fortunate enough to have been inside the comforts of a car, the overall situation was very sad because the road were slippery, supports were collapsing and we received news of frequent landslides having occurred behind us, where we had begun our journey from, and ahead of us, where we were bound. At 5 p.m., we heaved a sigh of relief as we reached our destination, Dhunche where we were supposed to reach 4 hours earlier. Dhunche is located within the High Mountain region, north of Kathmandu at 1950m above sea level within the boundaries of the Langtang National Park. The ordeal was over and we stayed at a nice hotel where the dinner was delicious. We took prophylactic Acetazolamide, 125 mg bid before sleep and eagerly anticipated the tingling sensation it would bring.

"Bye-bye Dhunche"

After having a cup of tea and bread for breakfast the next morning, we grabbed our backpacks and began our journey with a refreshing walk across the Dhunche village by the jungle. After 30 minutes of strolling with our backpacks, we reached Ghattekhola, the stream from where our first ascent would begin. The way was too dangerous (rock-fall area) and we got news about death of a person under rock-slide on the same way that we were heading towards. After about 4 hours of climbing, we reached to Deurali, 2,600m, where we found a hotel. The Himalayan Rescue Association(HRA) team, which consisted of medical personnel belonging to MMSN reached there after sometime. It was right when all of us finished our hearty afternoon lunch that one of our members from OUCRU team felt sick. He had fever with chills.

"Do you have other problems?" one of the doctors asked him.

"It is difficult to walk and I have swelling over gluteal area", he said.

Immediately, a diagnosis of perianal was made and the smaller one of the two gluteal abscesses was drained by one of the doctors from HRA team. Unfortunately, the second larger abscess had to be attended to for which descent was inevitable.

"He has to descend immediately" we concluded.

Thus two people, him and an acquaintance to accompany him started to descend. The rest of us, five from our team and others from HRA, continued with the journey - a steep climb up to Chandanbari, 3350m (famously known as Singomba among the locals) where we reached at about 4 p.m. and settled for the night. The weather here was exhilarating, more so because of its unpredictability as drizzles of rain occurred every once in a while, without any forbearing. This place was famous for housing Yak cheese factory. Unfortunately, there was no electricity and no network on our cellphones to capture and share nuances of Chandabari. Finally we took our dose of prophylactic acetazolamide which we took every day, and called it a day.

"Doctor, I am having tingling sensation all over my fingertips and my face", he said.

This was the early morning complaint from one of our team members the next day. It did not come as a surprise to us because we knew that acetazolamide, an elixir for mountain climbers, had its own consequences and side effects - one of which was the tingling sensation.

We moved on slowly after having tea. The path was relatively easy from there onwards. Throughout this particular pathway, we had the opportunity to interact with many pilgrims, many of whom were dressed minimally and were wearing only slippers. We suggested them to wear shoes that would protect them from getting cold". Soon, we reached Cholangpati, 3550m and took some rest and managed to enjoy some fresh local apples. We then resumed the journey upto to Lauribina (3,900 m, aka Lauribinayak) which was our final destination to setup OUCRU Heath Camp. Lauri means stick, and bina means without: a true devotee was supposed to climb the steep hill of

Courtesy: Dr. Subash Sapkota

Lauribina without any support of a stick. We tried but we couldn't manage to climb without any support. The weather was cold, rainy and the scene reminded me of the typical poster picture of a snow covered village. We had Lunch at a nearby Hotel and decided to spend the rest of the day there.

Early morning of 22nd August, the very next day, started with an hour long steep climb to the little Buddha Stupa at 4,200 m. Why we couldn't see it earlier was because it was hiding behind the mist and fog. Our fellow team member opted for a horse ride upto the monastery. Although steep, the trail was relatively easy. Nevertheless, we had to be very careful on that narrow path because towards our right there was a very steep drop. About 15 minutes before we reached Gosaikunda, we found a lady in her late 40s being carried by her relatives because she fell unconscious.

"She might have got HACE", we concluded.

"I think water has gotten accumulated in her brain for which she needs oxygen and syringe (dexamethasone). Another team of doctors(HRA) are on their way up with the necessary equipment and you will meet them on the way. Try to descend quickly" our intern doctor advised the woman's relatives. We later found out that she was treated accordingly by the HRA doctors.

When we reached our destination, we were mesmerized by the view of foggy hilltops with remarkable sights of the foothills and peaks. The view of Saraswatikunda and Bhairavkunda on our right and one of Nepal's holiest lakes, Gosaikunda (4,380 m) welcomed us with their magnificence and beauty.

"Image of Lord Shiva is seen at Lake: Mythology"

Hindu and Buddhist pilgrims gather around the Gosaikunda area every year, especially on full moon day of August which is regarded as an auspicious day. There is a belief that if devotees take bath from the water of this lake, all the sin that they have done in the past year would be washed away. According to Hindu Mythology, Gosaikunda is considered to be the abode of Lord Shiva and Gauri. Scriptures credit the creation of lakes to Lord Shiva himself, who is said to have pierced the mountains with his trident or Trishul (so that there is Trishuldhara) to quench his thirst and the pain that occurred after he swallowed an enormous amount of poison. The lake is the starting point of the famous river Trishuli. We couldn't stop admiring the beauty of the lake and took numerous pictures of the beautiful landscape. On the top, there was a temple of Lord Shiva and it was believed that if we looked at the Gosaikunda pond from there, we could see the image of Mahadev. We tried hard but were not lucky enough to visualize Lord Shiva in the pond. Something about folktales is that you always want to believe them! We returned to Lauribina at noon and setup our Health Camp there. On that day, about a hundred of pilgrims visited our camp. We measured their blood pressure and gave oral rehydration solutions to the ones in need and advised them to drink plenty of fluids. Major presenting problems seen in the pilgrims were mild/moderate headache alone, nausea/vomiting alone and lethargy. We treated and advised them accordingly.

The next morning we were very lucky to witness the magnificent view of Langtang and Ganesh himal, even if it was only for 5 minutes. The weather was not very cooperative as the sky was cloudy and environment foggy, the entire day. Maximum number of pilgrims (in hundreds) visited our camp

Courtesy: OUCRU Team Member

on 24th and 25th of August, one day before Purnima. We diagnosed Acute Mountain Sickness in approximately one-third of the pilgrims who visited our camp. They received acetazolamide 250 mg, bid orally with or without paracetamol. We also encountered High Altitude Cerebral Edema in 3 pilgrims and advised them to descend immediately to nearby Army Camp at Cholangpati because we did not have O2 cylinder and Dexa syringe.

"Lord Mahadev has called me and I will reach the Kunda by all means." This is the statement most old-aged pilgrims said when we advised them not to ascend further. High altitude pilgrimages in the Himalayas appeared to be the epitome of spiritual fulfillment. Many felt that the ordeal is not something to shy away from; indeed, suffering was perceived as an indispensable component in the path to salvation. With great appreciation for their faith, we resumed our task of healing and helping.

We made diagnosis according to the 2018 Lake Louise AMS scoring system by asking simple questions. The score consisted of symptoms like headache, gastrointestinal upset, fatigue or weakness and dizziness or light-headedness. Recently, sleep quality was removed as a criteria from the score and after that, the reliability of the overall score has increased. AMS was more severe in the older age group and especially among females probably because fasting while on religious pilgrimage is not unusual amongst females, and they might have avoided both water and food, making them more dehydrated than others.

"Knowledge of altitude illness

amongst pilgrims."

'Do you know what altitude illness is?', we asked.

"It is difficulty in breathing and I have this (showing asthalin inhaler) for its treatment", they said. We advised them to read the banners, flexes and pamphlets that we had brought. Pilgrims who walked only for 1 to 2 days had significantly more altitude sickness than those who walked up for 3 to 4 days. During the festival, thousands of pilgrims ascend rapidly (i.e., in 1–2 days) from Dhunche (1950 m) to Gosaikunda (4380 m). The rate of ascent in pilgrims was an important factor in producing AMS. Most pilgrims did not have proper footwear or adequate warm clothes. The rate of pharmaceutical prophylaxis amongst pilgrims was typically low, however, many pilgrims ingested one or more of the following foods to prevent AMS: garlic, ginger, lemon, or mountain pepper (Zanthoxylum sp.).

In the end, I realized that much needed to be done in order to discourage Nepalese pilgrims (and others) from relying solely on traditional Nepalese methods as a means to prevent AMS. Detail awareness needs to be created about altitude illness for high altitude pilgrimages. On 26th August, Sunday we descended from Dhunche, bid adieu with a heavy heart, taking back beautiful memories and wonderful experiences from the Majestic Gosaikunda Trek.

Ramesh Balayar,

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Freedom Climbers – A Book Review

David Mackay[1, 2]

Freedom Climbers, written by Bernadette McDonald, published by Rocky Mountain Books, 2011.

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In Freedom Climbers, Bernadette McDonald delves deep into an important chapter of Himalayan climbing history. Blending post World War II political history with chronicles of high altitude climbing, McDonald grants the reader an insight into the lives of the resilient, resourceful, and often relentless Polish climbers.

Through her meticulously researched accounts of era-defining ascents and intuitions on the lives and minds of people who made them, McDonald presents a topic of significant historical importance in the world of mountaineering. This book is as much about pursuits of the world's highest summits as it is about human spirit and strength.

Supplemented with archival photography, McDonald's journalistic approach to unraveling the stories of the prominent Polish climbers who emerged from an oppressive political landscape does a fantastic job of solidifying their legacies. These individuals, with an irrepressible obsession, often sought to climb on a remarkably fine line between extreme challenge and blatant danger. Their objectives were pursued at any cost, and death is rarely absent from the writing that details them.

The accounts of high altitude bivouacs are so numerous that the reader nearly forgets for a moment how physically and mentally challenging a night out on a mountain like this would be.

This book explores how, by ingenuity and necessity, the Polish adventurers created their own import-export economy to fuel their mountain pursuits. The climbing accomplishments chronicled throughout take the reader to summits of multiple regions; South Asia being the epicentre of activity.

Accounts of climbing feats in Afghanistan, India, Pakistan and Nepal describe the dynamics of climbing teams, the efforts of bold individuals and the lives of people in the communities found near the bases of some of the world's most famous mountains.

After reading through this record of climbing history, it becomes clear that the world may never again see a group of mountain climbers as resilient and visionary as the Polish climbers. Some climbed towards fame, others seemed to climb away from darkness, some for reasons more spiritual – each, through their climbing, was granted a form of freedom.

Book information

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Dr. David Mackay,

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My Trekking Buddy

Prasanna Karki

"Hello, Namaste" all in a Jolly mood I said.

Yes, I was in a jolly mood because I was back walking on top of the hills and near the mountains. Mountains, I had been seeing since my childhood. But I had never come this close.

"Namaste" he replied softly. A small face, fair complexion, straight black hair, black sunglasses, trekking sticks on both hands, knee caps on both of his trousers, a big backpack on his back, he looked my age. I could figure out by his appearance and tone that he was Chinese.

I still opted to complete the formality of asking his country.

"Where are you from?"

"China". He was Chinese.

"And you?" he asked hesitantly. A big backpack and no friends around; I could sense that he was a solo trekker. I generally like talking to strangers I come across. I knew solo trekkers don't like talking too much. They enjoy solitude. That is what they trek for. "Nepal" I replied and continued my journey up.

That day we had planned to stay at Chhomrong. But since it was the first day of our trek, we were full of energy and reached upper Sinuwa by four. The next stop was Bamboo, about two hours away. We were tired, so we knew it would take us more than just two. But energy and enthusiasm led us forward. It was dark and all our mobile phones had flashlights on by the time we reached. We realized, as someone rightly said "It's not where you trek, it's how you trek".

We were a group of eight. The very next morning, I along with the tiniest girl in our group and a heavy guy planned to leave early as we knew the rest of the group would easily catch up with us. Himalaya was our target, by noon. Walking through lush forests, looking at the beautiful mountains, frozen rivers and waterfalls, the view had all one could ask for. One thing

that provided me with constant energy throughout the journey was the ever smiling faces of the locals.

I had seen the 'tail' of the Machhapuchhre (the 'fishtail' mountain) the previous day. By then I knew that it had four sides. It was amazing how I was now looking at the other side of Machhapuchhre. The mountain had changed colors from golden to orange to white to pink during the day. Everything was new to me and it was absolutely fascinating.

We were hoping that the rest of the group would catch up with us on the way. But we reached Himalaya before them, which was also our stop for lunch. We waited for the rest of the group for more than an hour but they didn't come. We couldn't contact them as there was no network. Several things ran our minds; may be someone was injured, may be they went the wrong way?

And just then, came that Chinese guy.

"Hello" I said.

"Hi" he replied.

"Have you seen a group of five coming this way?" I asked.

"Five with one girl?" he said.

"Yes." I responded.

"Yes. They coming. They coming." he said.

We were assured and ordered our lunch. They finally arrived half an hour later.

That day, we stayed at Machhapuchhre Base Camp (3700m). The next day was the one we were waiting for, we were going to reach the Annapurna Base Camp (ABC, 4130m).

We started early the next day. Walking on the banks of a frozen river with Machhapuchhre towards our back and Annapurna in front, we were truly lost in the beauty of Himalayas. Walking for about three hours we finally had a sight of that board "Welcome to ABC".

We could hardly read the board, it was still a good 200-300 metres from us. But I could see two guys catching hold of another guy near it. He seemed to be in some sort of discomfort. When we went close, I recognized it was Scott and Lesley (two travellers from Australia whom I had talked to a day before). They were supporting another person, the same Chinese guy! He had just had an episode of vomiting and looked in considerable discomfort.

Being a medical student, several things ran my mind. First thing to pop up was AMS (Acute Mountain Sickness).

"Are you having headache?" I asked.

"No but I am dizzy" he replied.

I also asked for breathing difficulty. He denied.

Was it gastroenteritis then?

"This will stop your vomiting." I offered him an anti-emetic pill from my bag which I had borrowed from a senior. I asked him to take rest. Sadly, I couldn't stay with him as our group had targets

set for the day. Luckily, he was feeling much better in minutes.

"We will be around if you need help" I said and went up to enjoy the ABC. Covered all around with snow filled mountains, Annapurna South (7219m) to the south, Annapurna I (8091m) in the east, Gangapurna (7455m) and Annapurna III (7555m) to the north and Machhapuchhre (6997m) in the west; the base was truly piece of art. We were overwhelmed with the joy of reaching the base camp.

On our way back from the ABC, we didn't see the Chinese guy. Trailing down, I thought of what might have happened to him. Would he be able to continue his journey? Who would help him? I remembered all those classes and seminars that taught us about ABC (Not Annapurna Base Camp but the Airway Breathing Circulation!). Would he have required that?

Finally when we reached Deurali, my eyes lit up as I saw the face that they had been searching all the way down. He was trying to have noodles soup.

"How are you now?" I went nearby and asked him.

He looked up to me. There was a smile on his face.

"Thank you. Thank you." he replied.

I was delighted to hear those words. He looked comfortable now and looked set to complete his journey.

And I, continued my journey back too. On my way back I could see my friends laughing and enjoying each other's company. I knew I could depend on them, believe them. If I got into trouble like the Chinese guy had, I had them to count on. The Chinese guy made me realize the value of friends. Before leaving, he asked one of our friends to click a photo of him with me. That made me feel special. He took back my photo with him and I took back a lot of memories with him.

Prasanna Karki,

5th year Medical Student, MMC, IoM.

The ANMF Meeting: Some Highlights as Seen Through my Eyes!!

Pritam Neupane

Life has just been happening to me. Since I moved to the US in 2006, I have been caught up in what we commonly call the hamster wheel. Different that 'jivan chakra', this is a common way of expressing the routine life of people in the US. Basically, you wake up, go to work, come home, eat, sleep and again go to work the next day. People desperately wait for the weekend and try to cram everything they want to do then. Then they end up more tired the following Monday and you move on to the week's stretch again. Work here is not like 'sarkari kaam, kahile jala gham'. It is not like you get to just walk out and have tea / coffee, snacks and chat. (This would be ideal though). While you are at work, the system makes sure that it squeezes every penny's worth out of you. Doctors and other professionals at least have a chair to sit. People who work in grocery stores and in other low skill jobs don't even get to sit. But please don't get me wrong. It is only during these times when you are sitting down to write an article that you feel how you have been doing. Other times, it is considered quite normal to continue to do what we do- Lahurejivan!

Most of us medical folks are doing well here in the US. Most of us have good jobs, benefits, paid time off and plenty of money to spend. Many of us are specialists in different fields. Most of us have also travelled and enjoyed the high-end amenities that the US and other countries have to offer.

Most Nepalese here, including the recent graduates, who could potentially be considered to be of different generation than mine, continue to subscribe to the 'yo man ta Nepali ho' slogan. If you visit someone's house, you will see a handful of Nepali paraphernalia. At minimum, a flag and the 'top of the world' poster. We all still get a tickle chatting about Nepal, politics, environment etc. I tend to stay away from talks of politics in general but still have noticed that the partisan politics arguments have declined overall and a more of a national politics has taken stage. At a more local level, Nepalese here continue to feel rewarded by forming a party or an association in a heartbeat and we have what I call 'ekghar eksanstha' situation. Everyone then is the 'adhakshya' of himself or herself. Regardless, I tend to enjoy their enthusiasm.

Over the years, I myself have formed my own set of opinions about life matters, world matters and almost everything that I have come across. On this note, I have always believed that corruption in a country like Nepal is a consequence of people not having enough. This doesn't have to be extreme poverty but people not having enough to feel somewhat safe economically. As a basic animal instinct from the id level of Freud's analysis, which in turn ties into Darwin's theory of survival, we are inherently selfish beings. Our software makes us unable to think of others when our own wellbeing is at stake. There are going to be outliers (probably more than 2 standard deviations!) to this theory. But those are rare. Try to remember how many 'mahapurush' (you can see the male dominance here in a patriarchal society) have you met in your lifetime? Meaning, while possible for people to be selfless, it is rare in a cut throat environment. But when educated people get enough for themselves and particularly sensitive folks like us, doctors, get enough for ourselves, we do start to think of others. So a common theme when Nepalese meet, besides of course jaad and momo, is 'what can we do for Nepal?'. I must state that it is impressive to see how much the Nepali diaspora has shown concern for their janmabhumi. Similar was the theme of America Nepal Medical Foundation meeting this year which was held in Phoenix, Arizona. A

lot of people gathered, a bunch of money was collected and all people had fun.

We had a separate side meeting for Mountain Medicine Society of Nepal. We gathered in Dr. Bhupesh Khadka's hotel room for convenience. Dr. Basnyat was there and several people were virtually present with skype, facetime.

We discussed the work done so far and how far MMSN has come along since its inception. I in particular have been very impressed with the work and the continued fervor of our graduates. MMSN touches upon different areas of high altitude. We thought, overall, MMSN's role could be categorized into three different areas.

First is the area of continued training and exposure of new graduates, students to high altitude medicine. Medical people all over the world who have interest in high altitude have heard of Nepal and a fair number have been to Nepal. When they hear that you are a doctor from Nepal, they assume that you know about high altitude and have seen the mountains. People who haven't visited Nepal might think that you live in the wilderness and that a yeti could be walking in your backyard rampaging your dumpster like they get cayote or racoons here. It would certainly be mortifying not be well versed with this field of medicine. We thought MMSN has popularized high altitude medicine and have increased our graduates' experience in high altitude medicine. We need to continue to put our efforts in this area.

Second, as spider man says, with great power comes great responsibility! MMSN, now that it knows of the perils of high altitude travel and that the vulnerable population is no other than our own indigent porters, pilgrims and the yarsagumba tourists, it is compelled to act on these issues. While the work we do in Gosaikunda is important, if you think about it, almost no one dies in Gosaikunda. It is because, most pilgrims get out of there by the second day. Also, the descent is quite steep and most could be rescued on someone's back quite effectively. Almost no one dies of HAPE as most climb down before the time of HAPE onset. However, the yarsagumba situation is different. People are up in thin air, hypothermic conditions for days on end and are at much higher risks for altitude sickness. MMSN should explore these situations and help.

Third, MMSN needs to continue to lead high altitude research. As a poor nation, we may not have the required funding but we can always apply for grants and always have other interested individuals pull the right strings to help our cause. If you look at the bidhan of MMSN, our main source of income is indeed daan, sahayog, dakshina!! This is one place where poverty comes to our aid. It is like the lepers begging in front of Mahankaal mandir in Newroad. The more grotesque you are, the more tips you get. Try this and you would be surprised how often the cosmos will conspire to help you succeed.

Lastly, I do not intend this to be jaad khayeko belako guff which wears off with the alcohol level the next day. So, I would like to thank you all for your hard work and continued allegiance to the cause of MMSN. We shall continue to grow and prosper and defy the common guy's status and strive for an aberration much larger than 2 standard deviation and rise to the super ego status.

Sab kokalyan hos!

Dr. PritamNeupane.

Dhorpatan

Jayant Yadav

Two of our teams traveled to Dhorpatan just a week apart, yet both teams had completely different accounts of what Dhorpatan was like. One of the teams experienced lush green patans (pastures) with plenty of sunshine and the other experienced a snow heaven. Despite these differences, there was no doubt that this place was full of natural beauty, and a place one must visit.

We started our journey from Baglung, situated in western Nepal. We took a jeep early in the morning. Snaking through narrow hilly roads, we reached a town called Burtibang, from where we were supposed to start our trekking. Burtibang was a complete surprise for us. It was bigger than we had anticipated, it boasted of one the largest Primary health care centers that had a surgical setup. It had quite a few good restaurants that surpassed our expectations.

We started our trek on the same afternoon and after 2 hours of walk, we reached a place called Sahikhola. As it was already dark, we decided to stay there. This place had no hotels. However, people there were more than happy to welcome us to their homes. We stayed at a local's house where we were treated with local delicacies.

Early next morning, we travelled across beautiful valleys and rivers to reach Bobang where we had our lunch. Seeing children play around with car tyres and sticks reminded me of my childhood. In the afternoon we reached Deurali where we were greeted with heavy snowfall. Some of us were experiencing snowfall for the first time in our lives. This was such a beautiful scene; we had to stop to pose for the cameras. Within an hour, walking through the snow-clad trail, we reached Dhorpatan. It was very windy there, thus forcing us to stay indoors. We spent the next day exploring the deserted Dhorpatan, playing around with snow (and our first snowman experience), and gulping down the famous Dhorpatan potatoes!

The next day, we were set to return to Baglung via Myagdi. On our way, we crossed stunning snow laden paths, tall pine forests, beautiful serene rivers and heartwarming local communities. The clear blue sky in the background of stunning hills was a delight to the eyes. Around noon and we crossed a bridge and a narrow road to arrive on the other side of the hill. Here, we were in for a surprise. Guess what - we were welcomed with heavy snowfall, yet again!

We continued to walk amidst the snow, but it only became heavier. The trails began to disappear until they were almost invisible. We were all of a sudden walking in a feet and a half of snow depth. Fear crept into all of us, and we asked each other - were we walking the right path? Should we abandon the rest of the journey? But we were already too far and returning back was not an option. We marched on. And right about then, we noticed that someone might have just walked the same path by looking at big gum boot marks and instructions written on snow "You are in great danger. Follow me quickly." We had no options but to continue walking; but there was fear - what if the man himself had taken the wrong path?

It was already 3 hours since we had started walking on snow and there were no signs of civilization. Thankfully, after 15 more minutes, we sighted a small hut; and written there was "JALJALA 3400m". We took a huge sigh of relief. We knew Jaljala was an important landmark for Mt. Dhaulagiri ascent. We became happy to know that we were on the right track. Then, we were set for a rapid descent. Two more hours of the trek downhill and we reached our destination for the night, Lamsung (1100m).The next morning, we took a bus to Beni to complete the round trip.

For someone contemplating for a short, relatively easy, budget friendly and of course, beautiful trek; Dhorpatan is the place to go. Add in the warm local hospitality and you have got your money's worth. Also, if you are interested in hunting and not short of cash, this might just be the place for you.

Dr. Jayant Yadav,

MBBS, IoM.

An Off-Season Trek to the ABC

Asta SK Poudel

The thrill of living is what makes people subjugate the absoluteness of death.

This story takes you through a few beautiful moments spent in the Annapurna Base Camp trek. Welcoming people, alluring landscapes and challenging topography were few of the many facets of our unforgettable trip. Our trek started from Ghandruk and proceeded through Kimrung Khola, Chomrong, Sinuwa, Bamboo, Dovan, Himalaya, MBC, ABC, Jhinu and finished at Siwi.

The idea of a daunting trek I think was the aftermath of 5 studious years at medical school. Damauli and Hetauda were our community field placement stations. It was one of our several gatherings at Pokhara during New Year 2017 that further ossified our idea of a trek. Celebration of the New Year in Pokhara is a fascinating occasion in itself; what further excited me was that we were finally up for a trek to Rara Lake. I was told to manage our transportation upto Surkhet. Interestingly, I was notified of sudden change in plan by Samriddha, who was stationed at Hetauda. Annapurna Base Camp(ABC) had become our new destination, for which I was to reach Baglung bus park and collect tickets to Ghandruk for 7 of us.

January 8, 2017: We started our trek at Ghandruk (1931m). In the local language, I came to know that Ghandruk meant 'A Village of Stone". The stone paved pathways, houses and people who followed traditional Gurung culture made Ghandruk absolutely adorable. It was a shame that I hadn't explored such an enchanting place, fairly near to my hometown until now. About two hours walk from Ghandruk was Kimrung Khola (1952m) where we stayed on the first night of the trek.

Next day, we geared up early to reach Chomrong (2050m), the last village with a home stay facility in that trekking route (although we did not stay there). From here on, the unavailability of a full-option Nepali thali started worrying us. You know how Dal Bhat Power energizes us Nepalis 24 hours! Sinuwa (2050m) was the last station to offer us tasty Nepali khana.

We noticed a drizzle when we were midway between Sinuwa and Bamboo

Courtesy: Dr. Samriddha Raj Pant

(2400m) and it started raining heavily in a few minutes. Himal, one of our friends, (don't confuse him for a mountain) did not have a raincoat. The pouring rain made him outrun all of us to Bamboo. But in turn, his precious sneakers tore apart. Luckily, Nishan had an extra raincoat and a fixative to mend Himal's shoes after which we continued our trek to Dovan.

We were tired and weary when we reached Dovan (2600m) at around 5pm. Unfortunately, all hotels there were booked by a Korean team. We requested one of the hotel owners to explore the availability of hotels at the next station, Himalaya (2900m), but could not be possible due to poor connectivity. Our last resort was to walk through the forest in the dark with support of flashlights in our cell phones. What a fortuitous moment it was to have found a hotel to stay that night. Plus, we also met our juniors from medical school at Himalaya. I had never been that happy in my life; when you are hungry, thirsty and craving for a hide-out, you do not give a damn about all other luxuries of life.

You are never aloof of hardships throughout this course of life. Our third day of the trek proved exactly that. The snowfall from early morning lasted throughout the day; one can hardly comprehend the way nature works. Heavy snowfall, poor visibility and slippery trails brought chills into my spine after we left Himalaya. Although our juniors had left earlier from Himalaya, we met them at Deurali (3200m) and strode ahead of them, finally reaching Machhapuchhre Base Camp (MBC, 3700m). We were in a dilemma whether to call it a day at MBC or to head towards ABC (4130m). The weather was daunting; it was snowing cats and dogs! We were told ABC was just a couple of hours away, and all of us brave, young medical students (you know it!) decided to get to ABC the same day. Luckily, we met a group of porters heading towards ABC (only to know later that they were first timers too), following whose trail we finally reached there. The visibility was close to nil, and all we could think of was to get a room and cover ourselves in twenty blankets!

The next morning, I experienced the coldest weather of my life. I can never say for sure, but I think that the proximity of gallant snow clad mountains had made me forget the cold. The rays of sun pouring down to the whitest of snow imparted golden aura, a glow worth remembering. I felt a sense of accomplishment after seeing Machhapuchhre on the South, the one mountain I had been seeing on the North all my life. After some time observing the incomparable beauty, it was now time to bid farewell to ABC. On our way back, once again, we met our juniors at MBC. The longest day of our trek was that very day when we reached Chomrong (2050m) from ABC. We were so tired that many of us just dined on coke and chips and went straight to bed.

On the way to Pokhara, we had a bath in the Jhinu hot springs (1760m). It was soothing to have a hot bath after what had been 4 days of heavy duty trekking. The ponds at Jhinu were worth a dip (or more if you have time). Walking past the New Bridge, Kyumi we reached Shiwi, where we hired a jeep for Pokhara. On our way back, all that crossed my mind was that although this had been an off-season trek with minimal preparation, it can never go wrong when you are trekking with the closest of your friends!

Dr. Asta SK Poudel,

Intern Doctor, TUTH.

First Encounter with the Mountains

Saramshika Dhakal

It has been almost a year when I had my first encounter with the mountains. Last winter, we all geared up for our venture to Mardi Himal Base Camp. We left for Pokhara in the morning, early enough to escape the exponential rise of dust around the expanding roads. Trek to Mardi Himal Base Camp, which is famous for the panoramic view of Annapurna South, Annapurna I, Machhapuchre, Hiunchuli, Gangapurna and Mardi Himal, is a new trek route in the Annapurna Conservation Area. It is famous among tourists for the breathtaking views of the sunrise and the sunset. After reaching Pokhara, we took a bus from Baglung Buspark for Dhampus. Dhampus welcomed us with a cool breeze of air, all fresh from the Himalayas, and a beautiful view of the snow-capped mountains, which glowed like shiny white enchanters in the silvery evening. We decided to stay the night at Pothana, which was an hour's walk away from Dhampus.

The following morning, we witnessed a beautiful sunrise. The view from Pothana Viewpoint left us all awestruck; the mountains had a snow-glistening smile and the forest belt

below seemed wild, yet welcoming. Our first stop for the day was Pitam Deurali – the crossroads where the trails to Ghandruk and Mardi Himal Base Camp forked out. After making the most of our time in Deurali taking photos and refilling our tummy, we bid adieu and set off for Forest-camp with utmost zeal. The white-blue paint-mark guided us through the notoriously annoying ups and downs of the alpine forest. With each passing junction, the vegetation changed, which made us more excited about the adventure that we were about to experience. By the evening, when we had reached the Forest Camp, our legs were all numb with pain, but a high protein meal and a warm fire made us all forget the excruciating pain.

The third day, we trekked to High Camp, through Low Camp. It turned out to be the most challenging day for us all. Our initial plan had been to reach Low Camp, but in a hope to reach Base Camp earlier, we aimed for High Camp. There was a steep ascent ahead of us and a long distance to cover. So there was no way we were slowing our pace on the rocky terrains atop the hills with steep slopes on either side. We kept on walking despite being out of breath and drained of energy. At times it seemed it would be impossible for us to reach the High Camp, but we did not stop walking. The cool wind, which was passing through our back, acted like a wave pushing us to march up the trail faster. But when the same wind got fiercer, we had to wait it out behind a stone. The stall cost us about half an hour. It was then that we realized how important it was to keep a proper track of time and how crucial it was to set feasible destination for the day while trekking up the mountains. Somehow, we managed to reach the High Camp that day. We heaved a sigh of relief upon seeing houses. The owner of the guest house was shocked to see trekkers come in at such late hours. We, on the other hand, were ecstatic, having reached our destination, but at the same time we were tired and the idea of being in high altitude made some of us feel sick. So some of us took Acetazolamide, and the rest of us who were feeling okay stuck to the idea of having garlic and ginger.

On the day of our ascent to the Base Camp, we hit the trail early in the morning, so that we could reach the Upper Viewpoint before the clouds veiled the mountains. The foot trails started getting icy, so we stumbled and slipped over the snow. With every round of exhaustion, we sat back and gazed up at the mountains to charge ourselves up. We exchanged our greetings with the travelers returning downhill. We asked each one of them how further ahead the High Camp was, and every estimate we got we made sure that we multiplied it by our speed-factor. As we reached the viewpoint, our eyes couldn't stop feasting upon the scenic beauty of all the mountains that had gathered in the lap of Lord Shiva; in that moment, everything else back home felt mundane. We wondered how things, which were concrete strong, could still be so soft to our heart. For a fraction of a second, there was a moment of self-actualization and reflection of our existence so far. We realized that mountains have the ability to help us jubilate the present moment. Keeping in mind that our ultimate destination was Base Camp, we resumed marching up the rocky trail.

The moment we stepped our feet on the Base Camp, there was a feeling of accomplishment. With the clouds sweeping in and out of the scene, we only had a moment of time to capture the grandiose view from the base camp with Mardi Himal and Machhapuchre on its backdrop.

The downward trail almost felt like a waterfall. Within an hour or so of us starting downhill, it started snowing. The melted snow on our clothes made it even worse with cold seeping into our bones. As the weather started to get worse, we decided to stay at High Camp again for the night.

The following morning, during the last day of our trek, we descended through an alternative route that led us to Sidhing. We snaked through the forest, crunching the dried leaves with our foot and the blue- white paint- marks still helping us navigate our path. After an hour-long jeep ride, we were back to Pokhara. With our muddy trousers, sweaty jackets and frizzy hair, we almost felt like a zombie in the streets of Lake-side. However, we cleared off our minds with a boat ride around Phewa Lake and a promise to treasure the experience for a lifetime.

It is said that the best of the journeys are the ones which are less planned. However, this statement will not hold true if you're a newbie to the mountains. Our minds are often full of insatiable demands and exquisite bucket list, and it does feel great to reach out and do things from the sphere of our interests. But we must always keep in mind that preparation is a must if we are aiming for the mountains. With trekking being so popular among the new Nepali generation, who have grown up watching Bear Grylls and Steve Irwin, I feel an immediate need of spreading the message that mountains can be unpredictable but we can mitigate the risks involved in a trek with proper planning.

Now that it has been almost a year, I'm looking forward for a break when I can tip-toe back to the mountains because the mountains are calling and I must go!

Saramshika Dhakal

2nd year Medical Student, MMC, IoM.

The Health of Our Mountains

Sachin Subedi

The miles long snow towers are worth more than a mere mark of beauty for the eyes to behold. Hindus have considered them as watchtowers where Gods reside and pull the strings of nature with harmonious perfection.

There is a delicate orchestra going around us, creating a beautiful music, but our headphones are on. When we take our headphones off and listen to the beautiful symphony, we realize that our music was not in accord with the grandmaster's rhythm; the result of our doings is a noise, which nobody wishes to hear. With our pursuit of progress, we have jeopardized the health of our mountains and the ecosystem. A chronic disease has caught the mountains, and is slowly starting to show its symptoms. It is about time we put off our headphones and listen to what our mountains are telling us.

The mountains around the world, rich in biodiversity which is a crucial component of the global ecosystem containing mining zones and economic zones, are home to some 800 million people. As the global temperature is soaring up, with the temperature in the last 50 years rising on a higher rate than the 100 years previous of those years, the mountains have had to share the impact of climate change and guilt of the havoc both. They are losing their ice, biodiversity and resource control while creating hazards, disarray and new problems for humans to deal with. Though the status of our current monitoring systems is insufficient, the trends and evidences do not seem to be optimistic.

Glaciers have served as a litmus test for global warming. Besides being indicator and fresh water reserves for millions of people, they help in reduction of temperature through reflection of radiation. As the glaciers melt, the reflectance drops, causing further rise in temperature and melting of glaciers, through a positive feedback loop known as the ice-albedo mechanism. Amplifying this loop, in the Himalayas, is the black carbon-dust heat entrapment in middle troposphere, namely, the 'Asian Brown cloud' that is the result of human induced pollution in this region, assisted by the mountainous terrain. The glaciers present today started their journey 20,000 years back; so as they melt quickly and cannot be reproduced as easily, we are bound to lose the freshwater luxury we have today. The current repercussions of the melt involve threats of Glacier lake outburst floods (GLOF) in the region, similar to that of Tam Pokhari in 1998, with a potential risk of IGLOF in ImjaTsho, affecting settlements in Dingboche, Namche and the entire Everest region.

The mid tropospheric aerosols, besides pushing tropospheric temperature and dropping surface temperature by dimming the sun, also affect the generation and dynamics of clouds. The Asian monsoon circulation may weaken and cause rise in moisture content. These effects alter monsoon flow and intensify monsoon precipitation, affecting agricultural conditions for a huge portion of the global population.

More than half of the world's drinking water originates from rivers and river-fed reservoirs. The shares of runoff that mountain regions contribute to these rivers are substantial: they range from 40 to 95 percent, depending on the region. Precipitation and air temperature control the runoff from mountainous watershed. While changes in precipitation amounts affect both annual and seasonal runoff volumes, temperature influences seasonal runoff behavior by controlling snowfall and snowmelt. A rise in temperature usually leads to more runoff in winter, an earlier ice and snowmelt in spring and, as a result, reduced runoff in summer. Though the current monsoon pattern may compensate for such phenomenon in our region, other mountain regions can suffer from drier dry season and wetter wet season.

Hydrological cycle will gradually shift from snow-ice domination to being under control of rain. As the damping effect of snow and ice storage gradually diminishes, we can expect a greater variability of flow. Droughts and floods can be expected for the same reason, as has been witnessed this year. On the other hand, diminished snowfall can lead to decreased runoff in rivers that depend only on snowmelt. While glacier-fed rivers may remain stable water sources for the next few decades in the least, the few villages that depend on snow-fed rivers are already struggling. This has already been a problem in villages in Upper Mustang since the last several years.

Agriculture, biodiversity and economy suffer consequentially from climate change. As the temperature is rising, animals have started migrating uphill, but plants cannot adapt in the same manner. While the diversity shift of crops and low land timber to higher altitudes could create economic potential in the future, the plants and crops on low lands are currently facing the impact. Glacier retreat, while helping meet the current growth of demand, can create water scarcity after shrinking. Regions that rely on melt water will suffer the most, especially on hot and dry seasons when demand is the highest and monsoon does not coincide with the heat.

As the ice loss is occurring at a higher rate than the greenhouse gases alone would predict, the heavy glacier retreat along with erratic heavy precipitation creates erosion and topographical changes resulting to hazards like flood, landslides and avalanches. Hazards are further accentuated by loss of diverse flora to hold the soil together, assisted by human expansion and unplanned extraction of resources. Socio-economic factors including demographic changes influence vulnerability and exposure, whereas climate change influences the frequency and magnitude of hazards. The 2012 flash flood in Pokhara, when the melt water burst into the Sabche Cirque (a large, debris-flled depression between Machhapuchre and Annapurna II-IV) flooding the Seti river, can serve as an example for the same.

There is still a great deal of knowledge to acquire in the natural history of this chronic disease. However, as time is running out, we have to act based upon projections. While the world's big guns are co-operating to mitigate the problem and undo the damage that the human race has caused, we, as individuals and nations, are accountable for our individual carbon footprint. The instance of smaller

nations like Costa Rica declaring to become decarbonized should be taken as example by every nation and society, however small, to play its part. The process of redemption is undoubtedly a slow one, so it is wise to expect the repercussions of the damage to last long, even when prompt actions are taken. Thus, even if we try our best to eliminate the causative agent, it will take time for the organs and homeostasis to return to normal. Until then, the management is symptomatic.

A small underdeveloped nation like ours has to be prepared for what is to come. A far sightedness in sectors like agriculture, disaster management and prevention is necessary. We cannot stop the glaciers from melting or keep the species from altering, but we can be prepared for the potential problems these hazards can create, via measures like smart farming, water reserves, energy management, bio conservation, etcetera. On an individual level, we have to follow the "3R principle" wherever possible, be it while using papers or driving a vehicle. However less significant these small acts may seem on the superficial level, it is these small acts of atonement towards our beloved mountains and our mother earth which will help us save our home.

Sachin Subedi,

4th year Medical Student, MMC, IoM.

Oxford University Elective Candidate Interview: An Experience

Saroj Kumar Jha

I am sharing my experience of an interview which did not go as I would have liked, but was a great learning curve for me.

My email read, "……..We would like to invite you to the MMSN Office for an interview on August 8, 2018, Wednesday….." and in no time I was very anxious as all interviews are scary, very scary.

It was written clearly in the email that the selection would be based on contributions in the past, current roles and future plans to MMSN. I had only participated in a handful of activities, MMSN journal clubs, talk programs, experience sharing programs, documentary shows, and outdoor activities like hiking and case-scenario based trainings. Apparently, there were very few contributions from my side to MMSN programs. So, I was pretty sure that I would not be selected for the elective this time around. However, I had plans of contributing to MMSN in future programs, and so I applied. Except for me, all the other candidates selected for the interview were intern doctors. Even though I was the most naive, I wanted to get an experience of how interviews usually go and so I went for it.

Because this was my first formal interview in MMSN, I did a lot of homework. I read about the organization's mission, activities and work areas. I talked to my senior who made it the last time. I researched my interviewers, including their educational background and past work experience. Lastly, I went through my prepared responses for common interview questions to make sure that I would not make serious mistakes.

My interview was supposed to be at around 4 p.m. As I was very excited about the opportunity and the interview I reached the venue early at around 3 p.m. After I reached the MMSN office for the interview, I came to know that I would be the last candidate to be interviewed. I thought this could be helpful, as I would know the types of questions being asked. While I waited outside, the first candidate entered. The inapparent voices coming from the interview room did no better than increasing my anxiety. A lot of things ran my mind, will I be as fluent as the other candidates, how loud my voice should be while answering, and a lot of other irrelevant questions. I was turning more restless with every passing minute. Suddenly I noticed that it was already 20 minutes and the first candidate was still inside. Thoughts were racing inside my mind. What is he being asked? Why is it taking this much time?

A few minutes later, he came out smiling. Ahhh, this made me feel much better. He came to us and sat beside me. I asked, "How was your interview?" He told it went good. I enquired if there were questions off topic. He told that questions were all that he had predicted, and also asked me not to be too anxious. Other candidates were then called successively till my turn came. No matter how comfortable you try to be before an interview, you will have that adrenaline rush once your name is called.

While I was entered the room, I told myself, 'ALL IS WELL!'. I had an awkward smile on my face. I asked, "Can I have seat?". I acted like I wasn't nervous at all. Even so, my voice was still shaking when the interview began. They had my resume with them. I did well at the beginning, answering questions about myself and telling them what I knew about the organization.

They asked me, "Why do you want to apply for this elective?" This was the question which I had prepared for the most because I knew they are surely going to ask me this and make a judgment basically from it. I answered the question well, I think. They seemed satisfied with my answer. This gave me confidence. Next came a few out of the box questions, ones I was least prepared for. Only God knows if the interviewers were happy with my answers. Few questions later, I was asked how MMSN would benefit by sending me as an elective. I gave them a regular answer, "I will share my

experiences with members of MMSN." They added, "What else?" Actually, I did not know more about the benefit that MMSN would have. I went blank. There was a silence in the room, which was scary. Nothing came to my mind. Now, I think this question decided the result of my interview.

My confidence suffered a blow after that. But, I maintained a smile on my face. They asked me a few of more questions. Other questions were about the ISMM conference that was about to be held in Kathmandu and about my contribution to MMSN. I gave them my readymade answers.

"Ok Saroj, we're done. You may leave." This was the final sentence from them before I left. Thank you sir, I told and came out of the interview room and took a deep breath. "Well, I may get selected for the elective" I told myself. It was more like a casual chat than an interview. There is a very famous Chinese proverb which states, "Precise knowledge of self and precise knowledge of the threat leads to victory." Know yourself, know your interviewer, and know that you may never prepare too much for your interviews.

Results were about to come. I wasn't sure if I would get selected, but I had given my 100 percent. The results came. Someone else got selected. I told myself... "FINE! There is always a next time"

So what did I learn from this you ask? Well, it was not only about the elective program but also about my attitude of giving up easily. I knew the chance of me being selected was very less. But, this time I didn't give up. Therefore, I worked for it and I know I will be a better performer in my next interview. Here is something I think might be useful if you are going for any interview. BE YOURSELF and you'll be fine. Stay calm and confident. Keep smiling. Prepare beforehand in researching about the organization and interviewer; and prepare your resume well. Speak loudly and clearly. Maintain a good body posture and eye contact. These are a few basics I learned in course of my preparation.

The interview has helped me become confident for my upcoming challenges and I hope it helps all the readers too. I wish you all the best for your upcoming interviews!

Saroj Kumar Jha

4th year Medical Student, MMC, IoM.

Porters at high altitude: Bearing greater load and even greater risks!

Sanjeeb Sudarshan Bhandari, Bikash Basyal

Introduction

Tall mountains have been seen as enjoyable and beatable challenges by humans for many years now. The daring nature of human being has led to plenty of attempts at conquests of the tallest peaks in the world. The success of summit of the beautiful snow-capped peaks, standing tall and cold against everyone who tries to conquer them, is determined by various factors. There are many involved behind every expedition and as more hands are said to make work lighter, it can be said that there is no other group of people that bear the burden more than the porters do.

The number of tourists visiting high altitudes has been on the rise with the increase in facilities, increasing development and improved and tourism oriented services available in most mountainous regions. The number of tourists travelling to Nepal has doubled in the last ten years from 2002 to 2012[1] and a significant number of trekkers and mountaineers have been seen to come to Nepal to pursue their interests. Mountainous regions are increasingly being perceived as holiday destinations.

Porters working in high altitude have been observed to be diverse in terms of age, ethnicity, build as well as average load carried. Studies have been done to highlight the epidemiology and demographics of porters working in various parts of the world from African countries to Southeast Asia. Both in terms of adversities and altitude, porters working in the Himalayas are exposed to harsh environments. Nepalese porters ranging from early teens to those in their late 60s have been observed to carry huge loads almost equal to their body weight[2] and this is done on a regular basis. The average load carried by a porter in the Himalayas per day is near to 90% of the total body weight with 88% of males and 71% of females carrying more than 50% of their body weight[3].

Compared to commercial porters, the trekking porters in Nepal are paid more in terms of their wages, which has encouraged many lowland porters to head up towards the high mountains in search of work. This is seen to have an impact on their health as they are not well adapted to the altitude as the native population[4]. Studies done among group of trekkers and porter staff comparing the incidence of medical conditions in the groups have shown that the porters experienced the highest diversity and severity of illness[4,5].

Health-related problems in porters at high altitude

With exposure to high altitude comes increased risk of all altitude and cold related health conditions. In addition to all non-preventable hazards, there are myriad of conditions that one can suffer from especially if adequate preventive measures are not undertaken. A study done during a 22 day trek at altitudes between 487m and 5100m has shown a total of 12 different medical problems not all of which are related to altitude related sickness. The problems that were seen to require evacuation were high altitude cerebral edema, cellulitis induced septicemia, severe anxiety and fever with suspected typhoid[5].

Porters are usually paid on a per day basis and their usual schedule of work does not include rest days from an

altitude point of view. The speedy ascent and eagerness to carry things as high and as fast as possible is driven by their desperate needs to feed themselves and their families back home. Mostly unaware about the risks of rapid ascent and sometimes negligent or over confident about the risks, the porters are thus a vulnerable group for all altitude related pathologies.

Although most porters are native to the region and considered protected from altitude sickness by many, it is common to see low-landers as porters in high altitude. This puts them at increased risks for altitude related pathologies. The non-local Sherpa porters in Nepal, who are locally considered by many to be protected from altitude sickness have been seen to be at risk of acute mountain sickness (37%) and even the life threatening complication high altitude cerebral edema (2%). The increased risk of these conditions among the porters can also be attributed to the fact that their ascent profile is not as safe as the fellow travelers population.

The respiratory conditions that the porters are exposed are both infectious and non-infectious. High altitude pharyngitis/bronchitis is one of the most common illnesses in trekkers and porter staffs[5]. The cold environment can slightly increase the risks of upper and lower respiratory tract infections. Lack of warm fluids and meals can also contribute to some degree of morbidity in terms of respiratory infections. The non-infectious respiratory problems can be hazardous in certain situations. Although free from the pollution of the big cities, indoor air pollution is turning out to be a major issue in most villages at high altitude. Consumption of firewood for cooking and warmth combined with smoking causes additive deleterious effects on the cardio-respiratory health of porters. Conditions such as chronic obstructive pulmonary disease (COPD) are a major cause of morbidity resulting from indoor air pollution combined with smoking. Exposure to indoor smoke from childhood can also be contributory to Bronchial asthma. Sleeping inside crowded tea houses by the fireplaces is a risk factor for Carbon Monoxide poisoning. Although less frequently reported as a common entity compared to other respiratory conditions, carbon monoxide poisoning cannot be overlooked considering the conditions that the porters usually spend the night in.

The common gastrointestinal problems encountered by the porters are mostly the same as those encountered by any travelling population. Traveler's diarrhea is one of the most common medical conditions reported in most of the trekkers. However it is not uncommon to see diarrhea and vomiting due to gastroenteritis in the native porters5. There are several factors that contribute to traveler's diarrhea and gastroenteritis. The overall low quality of food and water intake coupled with sharing among large groups of fellow porters, relative lack of sanitary habits are some of the main factors responsible for occurrence and spread of such conditions. The diarrheal illnesses in porters are complicated by the fact that they are less commonly reported for fear of being asked to leave their jobs and that proper rehydration and medical treatment is not easily accessible to all porters. The level of physical activity that they routinely perform also demand intense hydration and nutrition failing which even mild diarrheal episodes can run a protracted course. Thus dehydration can be a significant entity leading sometimes to acute complications.

The high level of endurance and physical activity that the porters are involved in predisposes them to all sorts of soft tissue injuries, lacerations and musculoskeletal injuries. Such injuries can range from minor sprains and strains to sometimes even dislocation and fractures. Lack of proper warm-ups and heavy loads make minor soft tissue injuries extremely common. This is then complicated by the fact that proper rest in cases of injuries which is vital for recovery might not be possible in majority of the cases.

Fever caused by enteric fever is a common entity especially in an endemic region such as Nepal. Infectious conditions such as fever supposed to be typhoid and cellulitis induced septicemia have been indications for evacuation in the porter groups[5]. In addition to all the aforementioned risks, there are various other conditions that the porters are predisposed to. The cold environment and below freezing temperatures put the sub optimally protected porters at risk of cold related injuries such as frostbite or hypothermia. There have been events of loss of limbs and in some cases even life that can be attributed directly to frostbite and hypothermia. Cold injuries aside, walking in the sun carrying loads in the heat and exposure to UV radiation also puts porters at risk of heat related illnesses. Ranging from minor sunburns to heat syncope, the condition can be severe due to added complications that arise from lack of adequate hydration. Over exertion due to carrying heavy loads already puts them in risk of dehydration and dyselectrolytemia, the disastrous consequences of which cannot be underestimated. Psychiatric conditions including anxiety disorders have been observed in the porters group, sometimes to the extent of requiring helicopter evacuation[5]. The fact that they are required to work away from home and away from their families most of the times predisposes them to homesickness and anxiety disorders. They are routinely observed to engage in binge drinking and occasionally seen to indulge in high risk behaviors. Some porters are seen to benefit from quality sunglasses that are left behind by the trekkers and tourists. However not all of them are lucky enough and are sadly the victims of snow blindness[5] due to repeated exposure to the glare in the snow. Other miscellaneous conditions include burns due to exposure to kerosene that is routinely carried to the high altitude camps. Cases of burns due to kerosene have been reported because of leaking containers of kerosene that come in contact with the skin of the porters that carry them[6].

Awareness

A study done in 61 trekking groups at Annapurna region investigating the level of preparedness and comparing that between porters and foreign nationals has shown that 92% of foreign nationals reported to have received information on altitude sickness and carried a medical kit. However less than a third knew the evacuation insurance status of Nepalese staff and porters on their trek and 39% would not pay for an ill Nepalese support staff's helicopter evacuation[7]. It can be said with a good deal of certainty that the majority of problems that the porters face are preventable to a certain extent and much of this can be done by raising awareness among the population. The awareness campaigns can be targeted directly to the porters in the region that they work in. Education about prevention and approach to altitude illness would be highly beneficial to the porters. Even a simple thing such as awareness of the importance of descent (or at least avoidance of further ascent) can be life-saving. In addition, educating about the importance of hydration and proper nutrition for the level of exertion that they endure is of paramount importance. The awareness raising campaigns should be conducted at both porters' level and travelers' level and efforts should be made by all authorities to meet the objective.

Education and literacy has direct impact on every developmental aspect of the country and tourism is one of them. Much that can be done for the porters has to do with education and awareness among them. Most of the porters are dropouts from schools and almost none of them have had any form of schooling whatsoever. Thus it is wise to say that while knowledge about basic nutrition and other things are taken for granted the porters are even not aware of what balanced diet is. They might not even know what sort of nutrition would give energy and what sort would be beneficial for their build. Provision of booklets and issuing pamphlets will only be useful as long as the porters are able to read them. Therefore raising awareness at the porters' level should start from the very basics of education. Classes, campaigns can be conducted on a regular basis in order to educate the porters.

While the travelers travel with weights depending on their comfort level, they might not be aware about the status of the porters that are bearing the rest of their weights. A third party might have been involved that would be assigning porters and their respective weights. It might make a difference if the travelers are made aware of the ground reality regarding the condition of the porters. Travelers should be encouraged to inquire with their respective travel agencies about the number of porters hired and the amount of weights each one would be carrying on their own. In cases where travelers are hiring porters on their own, a certain weight limit should be set and travelers should be encouraged to strictly follow the limit. They should be encouraged to not let the porters go ahead beyond the recommended rate of ascent as this is seen to happen in order to cut short the number of days taken by the porters to reach the destination. Almost all awareness campaigns would become futile if the primary reason for the porters being faced to perform in excess of their capabilities is not addressed. There are people who are forced to carry weight that is a multiple of their own body weight because of financial concerns. Therefore the burden that the porters are exposed to has to be addressed at a policy making level too. Rules should be made and implemented such that the medical expenses of all porters should be covered by the travelling clients. Compensation policies should also be implemented in case of any untoward happenings.

Strict surveillance and check points can be useful to ensure that the weight carried by an individual porter does not exceed a recommended level. It would also be worthwhile to check the status of clothing and gears whether they are appropriate to the environment that the porters would be exposed to. Things such as boots, warm jackets, sunglasses and gloves can be rented out to the porters on an as required basis. Collection centers can be established in popular tourist hubs and travelling population should be encouraged to donate their old boots and clothes. The collection centers for mountaineering equipment, which should be established with the sole not-for-profit motive, could rent out things on a cheaper rate such that every porter could afford to have proper gears at their disposal.

Trekking to remote areas necessitates pre-planning to augment otherwise limited or even absent medical services and the strength of planning depends on prior knowledge of commonly encountered medical conditions5. Medical planning for expedition includes protocols for preventive measures, medical communication and evacuation if required[5,8] and in all of these the porters cannot be left out of consideration. The establishment and organization of medical aid for porters does not have marked differences however from other high altitude aid settings. If a medical clinic setup is available, it should be made friendly such that porters are encouraged to visit and have any medical consultation as required. From a porter's perspective, a high altitude aid post or clinic would benefit from having a doctor or medical personnel who would understand the native language. It would be easy for the porters to express their concerns in their own language and most of them might not be able to express in English. One good idea would be to conduct daily lecture sessions in the afternoon or in the evenings at a time when the porters are free such that they could attend and get involved in discussions. Notices and pamphlets at all teahouses and lodges would be a boost to their attendance in the sessions. It would be reasonable for medical aid posts or clinic to provide free services to the local population, which the porters belong to as being done by Himalayan Rescue Association at Pheriche Aid post in Khumbu valley, Manang Aid post in Annapurna region and Everest ER at the Everest base camp during

mountaineering season. In the case that this would not be possible, it should be arranged such that the clients would have to pay for the medical checkups of the porters whenever they require medical attention.

With regards to medical kit for the expedition too, keeping the porters in mind there are no major changes from what one would usually plan for the expedition. The quantity of medications should be decided upon considering the risk factors for illnesses among the porters. Foreign trekking groups should acknowledge that due to the socio economic differences, Nepalese porters and staff are highly reliant on the group's preparedness and medical supplies carried by the group is often their only access to healthcare[7]. A routine medical kit for an expedition should include the medications for altitude sickness, antibiotics among other medications as well as equipment for dressings, splinting, (Equipment for medical backpacks in mountain rescue). It would be wise to anticipate as far as possible the risk factors among porters before planning on the contents and configuration of the medical kit. Before making the decision on quantity of things taken as a part of the medical kit, the number of porters should be given a serious thought.

Conclusion

It is worth mentioning over and over that porters are an invaluable part of every expedition and their role in the success of expeditions is more than that of any other party involved. While the manual aspect of their responsibility is constantly overlooked, they are being forced to resort to intense labor in order to fulfill their and their families' daily needs. They are required to work for more number of days then the other members of their team normally are since it is them who lay the foundation for the rest of team to work in. During the course of their hard work, these unsung heroes are at risk of various medical problems and health conditions. It would take efforts from various parties to address the risks that they are under and to make their work at high altitude safer in most regards. People who travel to high altitude and employ porters should spend time to acknowledge the efforts of porters and raise voices when necessary. Concerned authorities should make strict laws and implement them so as to ensure that this group of hard working people is not subject to exploitation. Weight limits should be adjusted and sufficient funds should be provided to cover rescue and treatment whenever necessary. Complaints of mistreatment can be and should be lodged loud and clear locally and can be reported to organizations that have been working for the overall protection and benefit of the porters[9].

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Sanjeeb S. Bhandari (MBBS, DiMM)

Bikash Basyal (MBBS, DiMM)

NepDiMM 2017 Experiences and Reviews

Charlotte Verney (UK)

The absolute highlight of the diploma was the people I met. NepDiMM is so international, I now have friends with shared interests around the globe and have travelled from the UK to Tasmania to climb with two of them already. Iceland is next I hope! As well as the other people on the course, the teaching team was brilliant. Who thought altitude physiology could be explained so clearly - thank you Andrew Luks. Being taught winter mountain climbing skills by Sherpas who have summited Everest over 20 times between the four of them, well, it doesn't get much better. What an experience. I learnt loads and I have fantastic memories for life.

Dierdre McCormack (UK)

What a privilege it was to participate in DiMM Nepal 2017, home of some of the World's highest and most beautiful mountain peaks. Having spent a Spring season with HRA at the Manang Aid post I was very keen to have more mountain medicine experience. The local and international faculty and participants made it a fun, challenging, and inspirational experience. A highlight for me was camping at Khangla Glacier and trying ice climbing and glacier traversing for the first time.

Eric Contant (Iceland)

The DiMM was for me a great way rediscover Nepal in a more intimate way. We had the opportunity to do the course in different settings, from big city to isolated glacier. Also, the addition of local doctors and guides to the program was a great way to get experience from the local expertise. All in all, this course was great to learn high altitude medicine and mountain medicine in the hottest spot for it, Nepal.

Jenisha Upadhyaya (Nepal)

DIMM was a lifetime experience for me. The amazing lectures, scenarios, rock climbing sessions, the friendship with fellow doctors from different parts of the world, the laughter, the pain, the wonderful trek to Manang, the singing sessions every night, the theme party, the adventure, the freezing cold and the glaciers will always remain in my memory forever. There's so much to see and learn in life when you set your foot outside of the four walls and into the wilderness. I am glad to have done this course, becoming the second Nepalese female DIMM graduate and I hope to contribute to Mountain Medicine in the future.

Kumaran Rasappan (Singapore)

The pre-course assignments were fun and made us read around the topic. The 1 month spent in Nepal was intense but extremely fun. We had a great time meeting people from all over the world and sharing ideas about mountains, medicine and their unique culture from their various countries and places of practice. The Khangla glacier experience was the highlight of the whole trip as we trained self-reliance, mountain rescue and evacuation skills at an elevation of 5000m in winter conditions. The altitude and cold made things really difficult but we managed to pull through. The course was an unforgettable one and the friendships forged will surely last a lifetime!

Pawan Karki (Nepal)

The one month during DiMM 2017 was perhaps the month when time travelled the fastest. The trek to Manang was the part I enjoyed the most. My roommate and tent-mate Kumaran was amazing. Staying in the high camp was the most challenging experience throughout the course and the glacier training was perhaps the best part. Thanks to my tent-mate Chhabi for keeping the spirit high and Brittany, my buddy, for checking on me throughout the trip. All in all, DIMM was one the most amazing experience of my life and I am really glad I got to be the part of it. Last but not the least thank to the wonderful people in the kitchen crew for feeding us the amazing meal and making me and Kaste a birthday cake at 5300m.

Ryan Ernst (USA)

We sprawl on the lawn in the sun behind the Hotel Manaslu, as first day introductions proceed. Our humble guides start answering "How many times have you summited Everest?". "Three", "Five", "Eleven"...oh man, I'm realizing, we're in it for real! The next four weeks is an intense whirlwind with an amazing group of international doctors, each with their own interests and skill sets. Am I really going ice climbing with an O2 sat of 78%? Yup. But fueled with the overwhelming efforts of the organizers, the world class expertise of the guides and lecturers, the camaraderie of our student group, the impossibly epic Himalaya, and a daily variation of everyone's new favorite dal bhat, it's all possible and achievable, and one of the great adventures of a lifetime!

Shailesh Niraula (Nepal)

Diploma was one of the best months of my life - something that I will never forget. As the weeks passed by, the course got more interesting and fun. Few things did stand out like Dr. Andrew Luks's classes, Lakpadai's interesting way of teaching, scenario training as we trekked our way to Manang village, Dr. McCall's talks on mountaineering, ice climbing, and the freezing cold at high camp. I would like to thank our Sherpa guides and especially our lead Sherpa Phurba dai for the technical training and an awesome experience in the glacier. A suggestion to the future participants would be, do know the knots and pack all your warm clothes (then some more).

Suman Acharya (Nepal)

The one month that I spent during DiMM 2017 is something that I will never forget. The DiMM 2017 group was a wonderful blend of trainees with some who were very experienced in ropes, harnesses and carabiners, and some other new enthusiastic faces. Singing songs throughout the trek, dances in the social evening at Manang village and, obviously, the times spent at Khang-la glacier are some of the moments that will be glued to my memory forever. The cold and chilly nights did challenge us at times, but looking back, everything was awesome. Most importantly, we built a strong friendship as we shared the beautiful moments and faced the challenging moments together. Cheers to it. *Resham firiri*!

Jemima Nilan (Ireland)

I heard about the Nepalese DiMM from Dr Ken Zafren in a chance encounter with him at Thorung Phedi.A year later, starting in Kathmandu, I embarked on an intense, but hugely enjoyable month of theoretical learning and practical skills development. We were an assorted mix of nationalities and medical specialties but quickly formed great working and social relationships. We had a lot of material to cover but received excellent instruction and guidance from our tutors, mountain guides and Nepalese organizers. We arrived as strangers but left as friends. It truly was one of the best experiences in my career (if not life!) to date.

Christopher Holden (New Zealand)

I was lucky enough to complete the DiMM Nepal in 2017. We were made to feel very welcome by both our Nepali hosts and the international faculty. It was great to be learning alongside such a mixed group of students, both in terms of their medical and mountain skills, and their cultural backgrounds. We continued to stay in touch as a group and help each other out now and again with bits of medical or expedition know-how. I would strongly recommend the course to anyone with an interest in expedition medicine in general, and high altitude travel in particular.

MMSN News and Activities

The fifth edition of Nepalese Diploma in Mountain Medicine (NepDiMM) took place in Kathmandu and Khangla Glacier (Manang) in November/ December 2017, with 19 new NepDiMM graduates.

In the 2018 climbing season, Dr. Subarna Adhikari and Dr. Suvash Dawadi volunteered in the Everest ER, the highest health setup in the world at 5380 metres, for two months.

Dr. Anjan Bhattarai volunteered at the IPPG Machhermo Health Post for a duration of 4 weeks in September 2017.

The Annual Gosainkunda Health camp

DiMM; Courtesy: Dr. Suman Acharya

was set up in the premises of Gosainkunda Lake, at 4380 m on the occasion of Janai Purnima Festival in August 2018. Five doctors (Dr. Suman Acharya, Dr. Anjan Bhattarai, Dr. Badri Aryal, Dr. Abiskar Thapa and Dr. Prakash Kharel) along with Mr. Rajesh Sharma, a medical student, volunteered in the health camp.

Dr. Suman Acharya participated in an eight week long placement at the John Radcliffe Hospital, University of Oxford, UK, which was organized and managed by MMSN, in September/October

Everest ER; Courtesy: Dr. Subarna Adhikari

in March 2017, and MMSN was a collaborator in its organization.

MMSN took part as a co-organiser in the Pulmonary Vascular Disease Workshop held in Chitwan in November 2017.

Workshops and talk programs with international speakers is being conducted on a regular basis. A basic

Courtesy: Dr. Prakash Kharel

Courtesy: MMSN Archives

2017.

Dr. Suman Acharya volunteered in the 2018 Upper Mustang Trail Race in the month of April, and Dr. Prakash Kharel, in the 2018 100K Ultra trial race held in the Mardi Trekking route in October.

The 10th Anniversary Caudwell Extreme Everest Conference was held

USG workshop was conducted under the guidance of Dr. Eric Contant in December 2017. Dr. Jessie Gehner conducted a workshop under the topic 'assessment of patients in remote environments in May 2018.

The monthly journal clubs conducted by MMSN continue to be an attraction and serve to help develop the ability of critical thinking among medical students in addition to the clinical knowledge.

'Climbing for fun' is an MMSN initiative that trains medical students and young health professionals in the field of mountain and wilderness rescue medicine; which runs on grant provided by the Farrar Foundation. We saw encouraging participation in the wall/rock climbing, hiking/cycling with case scenarios and camping activities, and expect similar response in near future. The ever increasing number of MMSN memberships is another heartening sign.

With the XII World Congress on Mountain Medicine just around the corner, we wish for a memorable experience for all the delegates. In the coming days, while continuing our existing programs, we hope to expand our work and knowledge into uncharted territories.

For frequent updates, please log into our website www.mmsn.org.np, our facebook group, or contact us via our email, mmsn@gmail.com.

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