

Proposal and Financial Forecast for the Diploma in Mountain Medicine in Nepal 2011

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Abbreviations:

UIAA – International Mountaineering and Climbing Federation; ICAR – International Commission for Alpine Rescue; ISMM – International Society Mountain Medicine; DMM – Diploma in Mountain Medicine; KMC – Khumbu Mountain Centre

This summary report is intended for those who have an interest in the proposed Diploma in Mountain Medicine in Nepal.

Introduction:

The Internationally recognised UIAA/ICAR/ISMM Diploma in Mountain Medicine is already running successfully in 7 different countries¹. In the UK alone, 107 diplomats have graduated from the course² and are now using their skills on expeditions and in advisory roles around the world. Over recent years the Nepalese Himalaya have become a more popular destination for tourist trekkers and mountaineers. With many moderate/high altitude sites accessible by foot and with challenging terrain suitable for practical skill development, they serve as an ideal location for running a Diploma course. Facilitating a Diploma specifically tailored to the needs of Nepalese medics will allow autonomy in education and research and increase the accessibility of the speciality to Doctors from developing countries. In addition it would improve employment opportunities, encourage Nepalese trained doctors to stay in country for post-graduate training and foster further research into high-altitude medicine.

From September to December 2010, a feasibility study was undertaken to ascertain the possibility of establishing a Diploma in Mountain Medicine course in Nepal. By addressing the aims listed below, it is hoped that a pilot programme could be run in Fall 2011, and funding secured to allow the course to continue in a sustainable fashion thereafter.

Aims:

- Devise a course that is both appealing and practical in content, covers the necessary syllabus effectively and that can be achieved in a reasonable time frame
- Establish locations for the theory and practical modules
- Identify an academic institution that will administrate the course and interested Nepalese medical professionals to become involved in the planning, implementation and long term organisation of the course

- Determine a predicted cost breakdown for all aspects of the course and begin sourcing sponsorship to make the course accessible to Nepalese Doctors

Methods:

The ground work began in September 2010 when I flew to Kathmandu and met up with Dr Maniraj Neupane, member of the Mountain Medicine Society of Nepal (MMSN). It soon became clear that the project's success would depend on Mani's organisation and contacts. During the subsequent weeks, with his assistance, I began making contact with organisations and people whose involvement will be pivotal to the planning of the course. I met up with eager young doctors as part of the MMSN to ensure there was enthusiasm for the project and ask them what type of course would be appealing. I also made preliminary contact with the owners of the main site being considered for the course. I visited the city's main private medical centres – Nepal International Clinic (NIC), CIWEC and a private dentist. As part of the HRA's preparatory program I engaged in a week of Nepali lessons.

In late September, following the flight to Lukla, I embarked on the trek to Thame via Namche Bazaar. Thame had been recommended by a number of people as an ideal location because of its relative ease of access, moderate altitude (c. 3800m) and new purpose built mountain centre. En route I spent a few days at Khunde Hospital with Dr Kami Sherpa and his son, getting the opportunity to see what medical facilities were available in the region. I discussed the proposal with the doctors, both of whom were excited at the prospect of the course.

In Thame, I spent several days exploring the surrounding areas with a guide, assessing the suitability of the terrain for the practical work. This included hiking to the Thyangbo glacier and discussing with local people the weather and conditions in the area at different times of year. I looked at the bolted outdoor rock face close to Thame and assessed its suitability for rock climbing instruction. I also visited the newly built and almost completed "Khumbu Mountain Centre" (KMC) – the proposed base for the course.

Soon after, I joined the HRA team in Pheriche to work the season at the high-altitude clinic. Midway through the season, due to ill health, I spent a week back in KTM, but used this opportunity to assess more locations within the city. I visited the "Pasang Institute" (PI) which houses KTM's only outdoor climbing wall, but also has indoor seminar rooms, ideal for lecture based teaching. Back in Pheriche, I finished the season and found it a valuable insight into the great need for remote healthcare for trekkers and locals.

In KTM, I presented my preliminary findings to the MMSN, with an encouraging result. Further to this meeting, the MMSN have organised a separate committee, dedicated to NepDiMM.

Results:

The Course

Standards:

The course will include the syllabus as laid out by the UIAA/ICAR/ISMM Diploma committee by whom it must first be approved. It will be made up from 50% practical and 50% theory work, although in reality these two components will overlap in many areas. The topic areas that will be covered include:

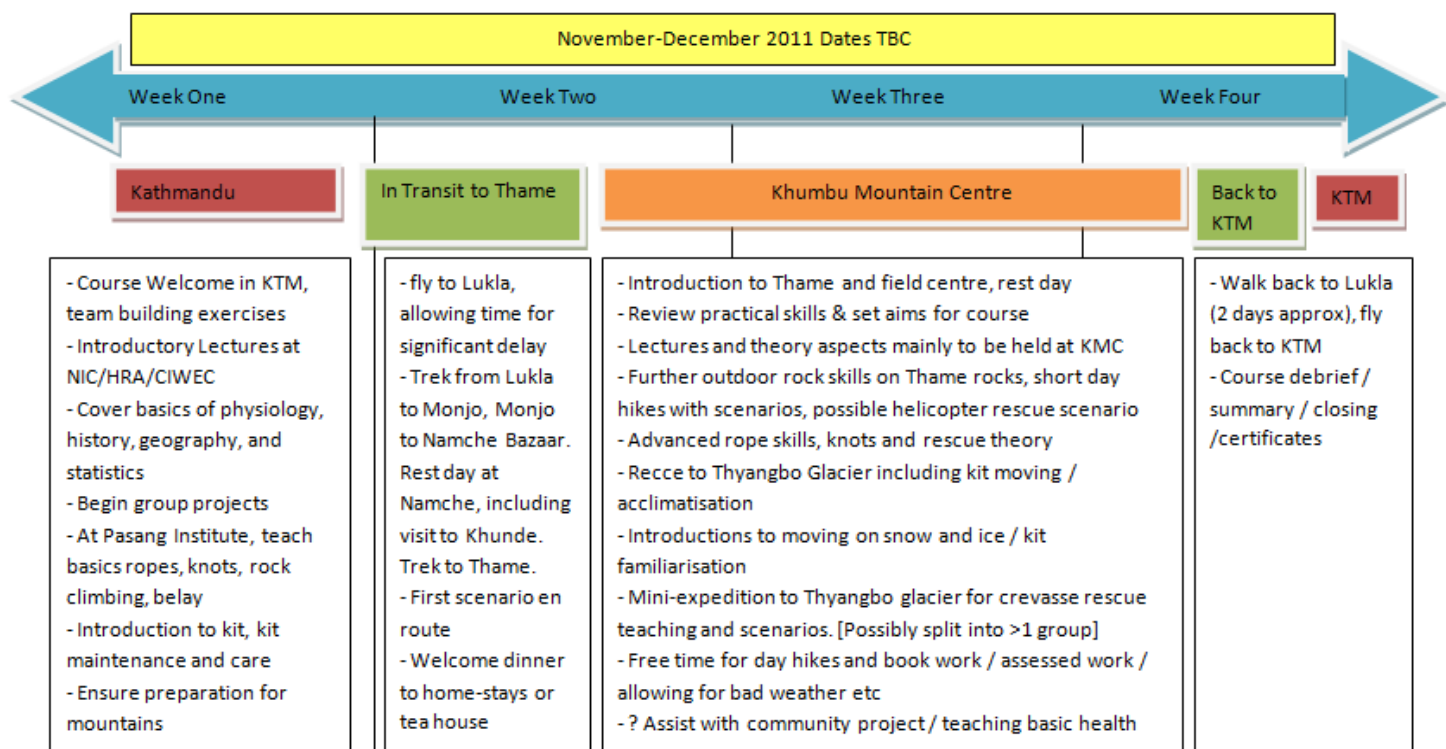
Basics of:	Minimal time (hrs)	Instructors:	Training:
Altitude	3	high altitude experienced doctor	theory
Hypothermia	4	experienced doctor	theory
Avalanche	4	experienced doctor + mountain guide or avalanche/ski patroller	theory + practical
Frostbite	2	experienced doctor	theory
Submersion and immersion in water	1	experienced doctor	theory
Heat and solar radiation	1	experienced doctor	theory
Survival in the mountains/ exhaustion	4	experienced doctor	theory + workshop
Children and mountains	1	experienced doctor (paediatrician)	theory
Practical traumatology	4	experienced doctor	workshop
Weather	1	mountain guide or meteorologist	theory
Rescue techniques (introduction)	1	experienced mountain rescue doctor, team member and/or mountain guide	theory
Rescue techniques (practical)	2	experienced mountain rescue doctor, team member and/or mountain guide	practical
Mountaineering techniques in summer and winter, and personal mountaineering equipment	18	mountain guides	practical
Information about:			
Nutrition	1	experienced doctor or nutritionist	theory
Exercise physiology	1	physiologist or experienced doctor	theory
Travel Medicine	1	experienced doctor	theory
Navigation in the mountains	4	mountain guide	workshop + practical
Personal first aid kit	1	experienced doctor	theory
Legal aspects	0.5	experienced lawyer or doctor with medico-legal experience	theory
Stress management	1	experienced doctor	theory
Pre-existing clinical conditions	3	experienced doctor	theory
Analgesia in the field	1	experienced doctor	theory
International mountaineering organisations	0.5		theory
Additional subjects selected by the course organiser	40		theory, workshop + practical
Total:	100 hrs		



Structure:

Following discussions with Nepalese doctors and final year medical students it was decided that a 1 month course, incorporating all the necessary topics and skills will be the most accessible for candidates and minimise costs. The benefits include; minimising transport costs especially for international candidates and speakers and easier to get time off work in one block. For those who cannot commit the time and money for the entire course in one year, “Part A” can be done separately first and “Part B” completed at a later date. Broadly the course would be composed of two components:

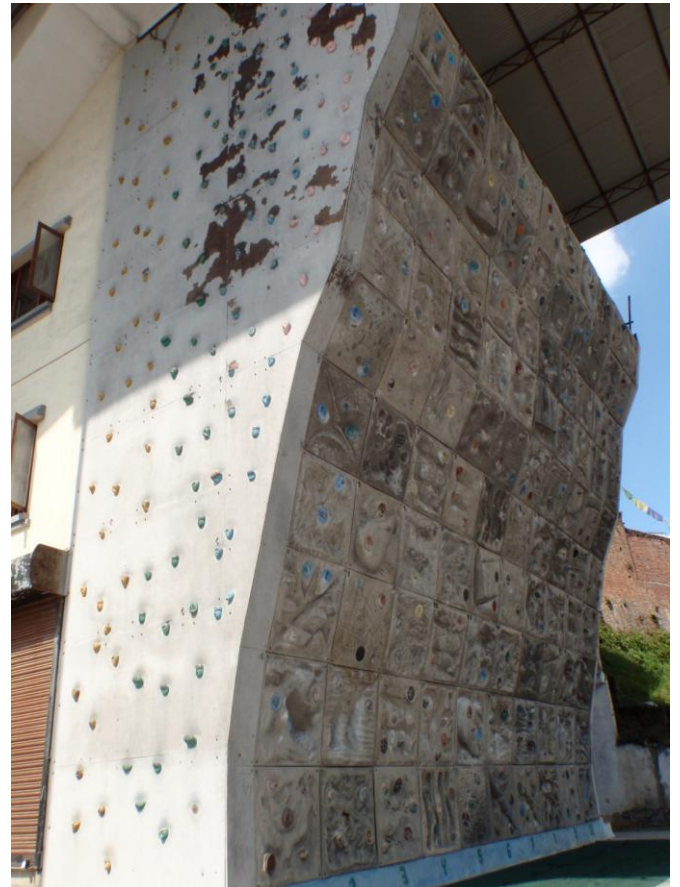
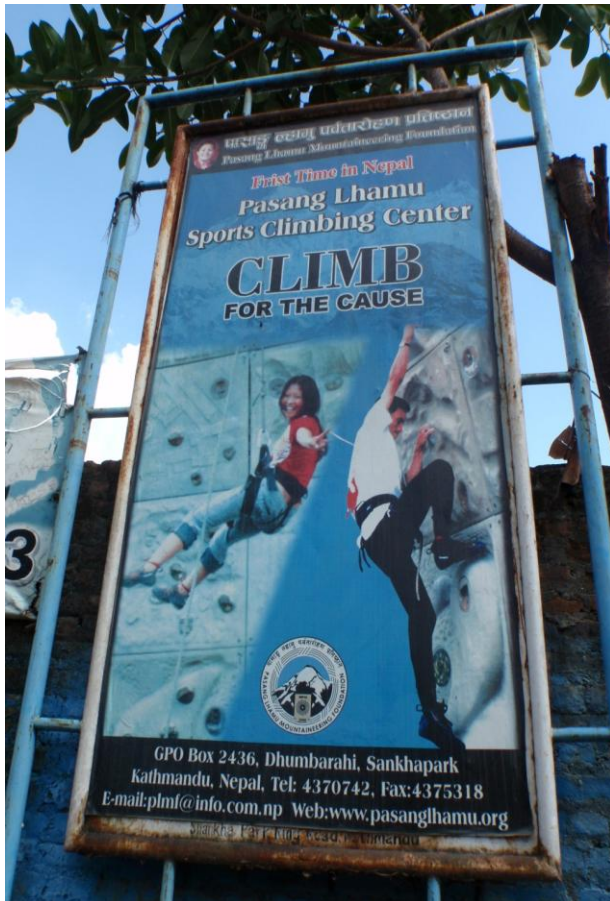
	Part A	Part B
Location	Kathmandu	Thame /surrounding
Duration	7 days approx	3 weeks approx
Activities	Mainly Theory Introduction to practical	Mainly Practical with more advanced theory
Order	First (can stand alone)	Second
Leaders	Local/ International	Local/International
Additional Work	Yes	Yes, ongoing
Pass/Fail Potential	No	Yes



As recommended, the course will have a pass/fail potential. Candidates will be required to show sufficient levels of knowledge and skill to complete the course and may be required to return on subsequent years if these are not achieved.

Location:

Part A: - Kathmandu, Pasang Institute, various clinics



Above Left and Right: The Pasang Lhamu Sports Climbing Centre – 20 mins from central KTM



Above: Thamel region of KTM



Right: The lecture room at the HRA

Part B: - Thame



Above: The Thame Region

Below: The Mountain Centre (Green roof in foreground)





Above: The bolted rock face



Below: The glacial camp site



Candidates:

The Diploma will be designed with the needs of Nepalese doctors in mind, and will be open to any qualified doctor or medical student in their final year of training, providing they show enthusiasm for the speciality. The course will also have a few places open to nurses and paramedics who could achieve the Certificate. The course will be run entirely in English.

It has been recognised that a mix of international students on such courses fosters academic relationships and sharing of a wide variety of skills and experience. Therefore, there will be a limited number of places open to international candidates.

For the pilot course it is proposed that there are 12-14 candidates, with a maximum of 4 international students and 2 nurses, paramedics or students. The course will be advertised around the teaching hospitals and clinics in Nepal, through email networks of MMSN and other Diplomas and via website forums. Initially, selection of candidates will be undertaken by a team of Diploma holders from other countries. Once there are Nepalese holders of the firmly established Diploma, selection will be undertaken by the local committee.



*Left:
Potential candidates attend the
MMSN lecture on Prospects for
the NepDiMM. Tribhuvan
University Teaching Hospital,
KTM, Dec 2010*

Assessments:

Assessments are necessary to ensure candidates achieve a recognised standard in both theory and practical aspects. Some of these will be in the form of ongoing assessments during the entire course – looking at teamwork, communication, leadership, knowledge and skills. Other more quantitative assessments *might* include:

- There will be a pre-course reflective essay on the topic of the importance and future of Wilderness and Mountain Medicine.
- The candidates will be encouraged to make public health presentations en route to Thame and in Thame to local residents. With mixed teams of Nepalese and non Nepalese candidates, short educational lectures will be devised to promote topics such as sanitation and hygiene.
- There will be a competition to design an educational tool to educate trekkers about altitude sickness e.g. leaflet, play, presentation etc. There will be access to a computer at the KMC and the possibility of internet.

- Half way through the course there will be a formative assessment in the form of short answer questions and MCQ's. These will help candidates to identify areas requiring attention
- "Journal Club" style meetings will be arranged, and everyone will be encouraged to develop article critiquing skills, effective literature search methods and propose potential research projects.
- A variety of scenarios will assess candidates' leadership and communication skills with some demonstration scenarios from the team to set the standards. All scenarios will be followed by a debrief to identify learning points.
- Formal assessment of safety on rock, snow and ice will take place in the latter weeks of the course and each candidate will be subject to individual assessment on aspects such as crevasse rescue.
- A final OSCE style exam will take place in the last week, covering any of the topics relevant to the diploma. This may also incorporate a group rescue scenario.
- Finally, candidates will be expected to submit a longer essay from a list of topics, which they can be working on throughout the course, due in by 31/12/11.

Safety:

Safety is a key element to a successful course. Undertaking such a project at high altitude means that inevitably some candidates and instructors will be affected with altitude related illnesses. To minimise this risk the ascent profile will be slow, rest days are mandatory and there will be a dedicated expedition doctor, whose responsibility is for the welfare of the team. The group will have an extensive medical kit with Casevac plans for all scenarios. It will be mandatory for all members to have personal accident and health insurance that includes helicopter rescue. Support staff and the porters will also be insured. Candidates requiring evacuation, who are not able to rejoin the group, will be able to participate in the course in subsequent years.

Personnel:

Doctors holding the Diploma from any country will be invited to join the course as teachers/leaders/support staff, although initially there will be no funding for international flights or fees, so this would have to be self funded. It is hoped that 4-5 doctors will be able to attend the entire course, although any volunteer who can spare at least a week, would be more than welcome. A variety of experienced doctors will be invited to speak in Kathmandu and throughout the course. It is hoped that once the first cohort of candidates complete the Diploma they will be able to act as leaders on the following years, and encourage friends and contacts to attend the course.

Cost/Funding:

Following extensive research and discussion with involved parties, the following cost forecast has been put together to estimate the funds required for the first 3 years of the course. I have avoided making a "per candidate" predication, because it depends entirely on the level of financial support received for the larger overhead costs (location rental, guides).

Thanks are due to MEDEX who have already helped support my work so far and enabled me to share this preparatory work at the "Hypoxia Symposium" in Canada in February 2011.

Right: Dr Buddha Basnyat (President of MMSN) & Dr Suzy Stokes at Hypoxia Conference 2011



3 Year Costing Forecast for DiMM Nepal

Item	Location	Per person	No of people	Per group	No. Of days	Tax	Potential Saving	Total	3 year total	
Accommodation & Food	Kathmandu	\$35	25 x		7	included	Yes with Homestays	\$6125	\$18375	
Accommodation & Food	En Route	\$20	25 x		7	included	Locals will get better rates	\$3500	\$10500	
Accommodation & Food	Thame	\$25	25 x		14	included	likely negotiable, homestays possible	\$8750	\$26250	
Flight	Lukla	\$110 one way	25 x				Yes, Nepalese get lower rate	\$5600	\$16800	
Basic Equipment rental	Thamel	\$100	12 x		30	x	Yes with kit sponsorship	\$1200	\$3600	
Group Equipment Rental	Thamel	x	25	\$650	30	x	Group purchase equipment rather than rent?	\$650	\$1950	
Khumbu Mountain Centre	Thame	x	25	\$2500	25	\$625	x	\$3125	\$9375	
Pasang Institute	Kathmandu	x	25	\$85	3	included	already discounted	\$255	\$765	
Porters (including insurance)	All	x	8 x		14	x	no	\$1500	\$4500	
Nepalese Guides	All	\$50	3 x		30	x	no	\$4500	\$13500	
International Mountain Guides (Fees only)	All	\$250	3 x		30	x	no	\$22500	\$67500	
International Mountain Guides (Flights)	All	\$1000	3 x		30	x	rates will vary with country of origin	\$3000	\$9000	
Park Entrance Fees	Park Gates	\$14	25 x			x	included	\$350	\$1050	
Taxis/Buses	Throughout	x	25	\$100	30	x	Van hire?	\$100	\$300	
Group Sat phone	Throughout	x	x	\$250	30	x	Borrow from someone?	\$250	\$750	
Group medical kit	Throughout	x	25	\$500	30	x	?Donated	\$500	\$1500	
Stationary/Printing/Admin	Throughout	x	25	\$500	30	x	x	\$500	\$1500	
Candidate International flights and Personal Accident Insurance not included										
								TOTALS	\$62,405	\$187,215
								add 10% inflation per year		\$206,560

These predictions have been made based on a group of approx 25, including 12-14 candidates, 4-5 doctors, 1 group leader, 3 IMG's, and 3 Nepalese Guides. Calculations for support staff e.g. porters, have been made separately. I have also assumed that every candidate will need to hire equipment, and that all participants will be staying in mid-range hotel accommodation whilst in KTM and tea houses en route.

It is proposed that international candidates will pay a "course fee" that would cover the individual expenses and a proportion of the group expenses. Therefore it is likely that the above calculations are an overestimate initially, and I have acknowledged the multiple potential for savings – e.g. Nepalese candidates staying in their usual residences rather than hotels, getting cheaper airline tickets and all candidates making the most of the possibility of home stays. It is also hoped that commercial sponsorship will be available for kit and equipment. This overestimate will hopefully buffer the additional expenses encountered along the way that are impossible to predict.

Finances would be managed by the committee with a bank account held with a reputable bank, all transactions requiring 2 signatures and accurate records kept throughout. An annual expenses report will be expected.

Sponsorship is being sought from any organisation with similar interests and aims who share our dreams to get this Diploma off the ground. We are hoping that donors can make a three year commitment, although we appreciate that in the current economic climate, this may not be possible. We welcome support in any form – that is, sponsoring an individual student, meeting the costs for the guides, covering specific costs e.g. equipment rental or location rental, or indeed coming on the course as an instructor/teacher.

Ongoing Organisation:

This will be undertaken by the MMSN NepDiMM sub-committee who will be responsible for an annual report, including finances. I will continue to be involved in the project as long as required, the hope being that it will be entirely self-sustaining after the first few years.

Conclusions:

Following much research, I do believe that the proposed NepDiMM has great potential for success. There are certainly enough enthusiastic participants waiting to start, and, providing adequate sponsorship can be found, it is likely that the pilot course will run in November 2011.

If you have any further questions, please do not hesitate to contact myself or Maniraj and we will endeavour to help. With thanks to all for their support so far.

References:

1. UIAA Website. Mountain Medicine. http://www.theuiaa.org/mountain_medicine.html. [Online] Accessed 16.08.10.
2. Medical Expeditions. Holders of the UK Diploma in Mountain Medicine. http://medex.org.uk/diploma/diploma_holders.php [Online] Accessed 06.02.11