

Where is travel medicine failing? Insights from high altitude trekking

Before setting off on a holiday, particularly of the adventurous kind, it is vital to obtain appropriate medical advice to ensure a safe trip. However there are concerns that this need is not being adequately met. In this comment, Irmgard Bauer from James Cook University, Australia, discusses where travel medicine is failing and what can be done about it, in the context of her recent observations of travellers engaged in high altitude trekking.

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An insightful beginning in Nepal

Over the 25 years as a medical specialty, travel medicine has been accumulating a growing body of knowledge as an evidence-base for clinical practice (Curr Opin Infect Dis 2011, 24, 403-409), which assists in providing the travelling public with appropriate health recommendations and preparations for their upcoming trip. One would expect then that some form of 'evidence' of this preparation, even if not formally studied, be apparent at the destination of this very trip. A recent stay at a tourist destination casts doubt on this assumption.

During October 2013, I conducted research with high-altitude trekkers wearing contact lenses in the village of Lukla (2840m above sea level) in Nepal's Himalaya (Travel Med Infect Dis 2015, 13, 178-184). Lukla is famous for 'the world's most dangerous airport' but, more importantly, it is the starting point for many popular high-altitude treks in the Khumbu region, the most famous trek leading to Everest Base Camp (5364m above sea level). Others head to various peaks above 6000m. In October - with November the high season for trekking - around 8000 trekkers gather in the area. For a month, the daily hours in the airport, in various cafés, on the streets, and in my own lodge allowed ample opportunities to observe the trekking population, overhear discussions among them, and engage in conversations with them. This was an excellent chance to see the outcome of travel health advice and trip preparation rather than the 'send-off' at the beginning of the journey. These were real people in a real destination pursuing a real tourist activity, not the anonymous

'travellers' in published recommendations.

From 13 October onwards, typhoon Phailin in the Gulf of Bengal brought very bad weather to the trekking region. However, it allowed observing events in a shorter period of time than what it normally would have taken. The following selection from numerous impressions and vignettes does not emerge from systematic research, nor was it planned. Rather, sensitised by episodes spotted early on, the appearance of more and more incidents forced me to take notice. No figures support my notes (other than saying that I had laid eyes on thousands of trekkers during this month), nor do they claim generalisability. Rather, it is my aim to report main areas of concern as they are of interest to travel medicine, and to highlight some current weaknesses the specialty should address so that travel medicine can fulfil its self-declared remit.

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Sun: swelling, snow blindness, and sunburn

Many trekkers returned with swollen eyelids and what appeared to be severe conjunctivitis which they attributed to the sun, the unexpected snow and perhaps inferior sunglasses. Some had experienced very painful snow blindness that kept them confined to lodge or tent for hours to days. Some thought that this could not happen on a tourist trek. One said he did not know that snow blindness actually meant damage to the eye by the sun's reflection on the bright snow. None had any treatment at hand or received advice on this possibility. Although it is hard to assess the quality of sunglasses just by looking at them, many seemed to be cheap fashion items rather than purpose-appropriate sunglasses (Int Ophthalmol Clin 1999, 39, 59-78).

Severely sunburnt faces were the second sun-related observation. Particularly trekkers who had been caught up in the turn of the weather and the unexpected extreme snowfall, returned to Lukla with discoloured faces, blisters the size of entire cheeks and thick layers of peeling skin. The icy cold wind and being in or near snow will have failed to convey that their skin was actually burning. The bottom lip proved especially vulnerable because of its direct exposure to the sun above. If sunblock was used at all, it may have been licked or eaten off and re-application forgotten. Two cases stood out. One young man's face was severely burnt. His bottom lip, extending from his face by about 3.5cm, was an irregular, swollen, blistered, bleeding mass with strictures and specks of pus. He was in pain and had difficulty articulating himself understandably. A mature-aged woman's entire bottom lip was so burned that it resembled a rigid piece of charcoal, protruding from her face grotesquely. She was unable to speak. Photos would have been of medical interest but, in a crowded departure hall in front of already staring others, it seemed insensitive and inappropriate. One might argue that, today, sun protection is a matter of common sense but, in its absence, reminders seem crucial.

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Altitude: misjudgements and mountain sickness

The utmost bewilderment on the trekkers' part relates to all matters of high altitude. Perceptions and advice (if) received could not be more heterogeneous. Many, especially on arrival, felt that altitude was a matter of the mind, and fit, tough and healthy people like themselves would have no problem. People who took altitude seriously often found themselves ridiculed. The altitude sickness pill Diamox was a particular point of contention. Many had heard of it or carried it but had no idea what it was for. Some travel clinics had allegedly advised against it or said the trekkers should just 'see how they go'. Some carried it, but only used it once their headache was very severe, which still meant they needed to follow standard advice and descend immediately. Whether they actually did descend could not always be ascertained.

One woman ascended with a worsening headache that became unbearable once she reached the designated peak. She carried Diamox but didn't know what to do with it and descended by default as there was nowhere else to go. Others took Diamox as per established guidelines in advance (Trav Med Inf Dis 2014, 12, 29-39). In groups, the problem came to a head. People felt doctors had no clue what they were talking about since practically each and every person either had no or differing advice. Consequently, friends' advice rated higher than medical advice. Some trekking agencies also had suggested to 'see how you go' with no further comment, such as recommending prompt descent. A young couple reported on a guide from a reputable international company not attending to a trekker with acute mountain sickness (AMS) who had collapsed and hit his head. Fellow trekkers had to provide First Aid.

One particular case around the use of the potent steroid dexamethasone is of note where the trekker involved shared the details with me. Having just arrived in Lukla after a long and delayed trip from his home country, he started the trek mentally and physically tired. His friend and fellow trekker, a medical doctor, encouraged him to ascend quickly without the recommended acclimatisation day in Namche Bazaar (3420m above sea level) so they could catch up with friends who were days ahead. The trekker was exhausted, needed proper acclimatisation and requested a day's rest. The doctor tried to persuade him to accept steroids so that they could move on swiftly. Wisely, the trekker declined and returned to Lukla disappointed, abandoning his trek. Dexamethasone has a place in prevention and treatment of AMS. What raises concern is the casual approach of its use not for a specific indication, but for convenience's sake, thus bypassing careful consideration of a potentially harmful drug (WEM 2010, 21, 345-348).

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Preparedness: fitness levels and language barriers

Many trekkers arrive in Lukla who seem fit and well-prepared with equipment that suggests experience in this kind of endeavour. Many others, however, seem to have no idea what awaits them and appear woefully underprepared in terms of clothing, footwear and equipment. Some have

never been to altitude, have never seen snow, or have never trekked before. Some put much thought into the colour coordination of their outfit that, nevertheless, does not seem up to the task. Considering that this is one of the toughest high altitude trekking regions, it is bewildering how unperturbed people were.

Trekking from Namche Bazaar down to Lukla myself, in the valley before Lukla I came across a group of elderly people from North America. A few middle-aged people, whose role quickly became clear, were also part of the group. One older woman could barely tackle a small rock step, and a younger group member almost lifted her over the obstacle. An elderly man with a helper on each arm had trouble negotiating the path. All this happened in pouring rain. My first impression was that they might have been on a day tour from Lukla so that they could experience 'trekking in the Himalaya', at least in a small way. I still decided to ask to confirm my assumption. To my great surprise, the group was heading to Everest Base Camp! I saw other elderly people, without any guide, who struggled just to stay on the path.

A number of obese and clearly unfit trekkers had difficulty even navigating the short walk around the runway in Lukla. One of them, a young man, had big plans to reach Gokyo Ri (5369m above sea level); friends who had been there previously had reassured him that he would be all right. On arrival, a young obese woman had to be pushed slightly to exit through the door of the aeroplane.

Fitness was not the only problem. With the changing global political situation, many people can now travel who were not able to before, e.g. citizens from Eastern Europe. It was surprising to see how many international travellers, not just from Eastern Europe, did not speak any English. Although some guides spoke excellent Spanish, French, Japanese, or German, many others had trouble speaking or understanding English. Numerous times did I hear 'conversations' where neither party had an inkling of what the other meant. In a medical emergency, not being able to converse could have disastrous consequences. In other instances, people could not read warning signs when they came without illustrating pictorial symbols.

The way many Himalayan treks are marketed suggests that such treks can be done by anyone and are little different from walking to a neighbouring hill at home. Beautiful mountains in brilliant sunshine with trekkers smiling into the camera do not insinuate rapidly changing weather, snowstorms, and miserable conditions, as well as the toughness of steep ascents, thin air, coughing, cold and diarrhoea. In a hostile environment, a small problem can quickly become a very severe one. Most people, through preparation or sheer luck, will not encounter any problems and have a once-in-a-lifetime experience. However, when things go wrong, for whatever reasons and due to whoever's fault, calls for the rescue helicopter are heard quickly. Living metres from the helipad, I often learned the reasons for a flight, mainly AMS, injuries and, sadly, some fatalities. For example, when the snowstorm hit mid-October, numerous rescue missions were necessary to pluck people from the mountain until the helicopters could not land on the deep soft snow anymore. Trekkers suffering from any degree of AMS were trapped and unable to descend.

Many trekkers mentioned that they had not visited a travel clinic or their General Practitioner (GP). Considering the destination and chosen activity, this is puzzling. With some exceptions, trekking companies (local, overseas) also did not seem to talk much about these things, and some guides were reportedly unprepared and ill-equipped to deal with poorly prepared clients. The few observations presented here were, of course, easy to spot, and a thorough study might reveal that these were rare incidents, but more likely that a large number of people are wandering into the mountains who are not prepared for being there. Overall, I was alarmed by how often applied travel medicine was amiss during the peak trekking season in the region.

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Where is travel medicine failing?

Reflecting on the vignettes above, the first thought that comes to mind is 'Travel medicine is meant for the travelling public but the travelling public doesn't seem to be aware or care'. There appear to be some shortcomings that have not yet been tackled, let alone solved, by the specialty. Although there may be other equally important concerns, based on my observations, two main themes appear in need of remediation: travel medicine's credibility, and the failure as yet to understand the traveller. Both are separate yet inextricably linked and influence each other.

“ If we keep asking *what* and not *why*, travel health advice remains largely confined to academic papers' conclusions but is of limited relevance to the travelling public. Irmgard Bauer ”

Travellers' confusion and subsequent lack of compliance are in no small way influenced by the different messages sent out by health professionals. If health professionals seem unsure in the eyes of the public, the public will not take them seriously. Like malaria prophylaxis, the prevention of AMS seems to be a matter not only of personal opinion and preference but also of different schools of thought emerging on different continents. This diversity of views is beneficial and productive in academic and scholarly circles - it does not help the public. Considering that both malaria and AMS can be fatal, that travellers talk to each other, and that we deplore in numerous papers the travelling public's disregard of advice and lack of compliance, it is prudent to strive for a research-based consensus in travel health advice and prophylaxis and send out an unambiguous message. After all, travel medicine's credibility is at stake.

The second main reason is the failure of travel medicine to understand the traveller. This leads to textbook recommendations that are largely ignored, leaving health professionals puzzled. Tourism academia teaches and researches tourist psychology in order to understand how its very target population thinks in order to tailor marketing, destinations, activities, and so on accordingly. Travel medicine does not seem to feel the need to know its target population, the travellers, so that pre and post travel care and health education could be tailored according to their needs and requirements, rather than to the travel health professionals' assumptions.

In the past, a considerable number of studies focused on knowledge, attitudes and practices (KAP) of travellers. These studies are useful and should be replicated at regular large intervals to monitor long-term trends. KAP is still important, at least for topics where little is known. However, by now we have a pretty good idea what people know, what they think, and what they do. We should now move on to find out why they know (or not), why they have certain views and why they do what they do. If we keep asking what and not why, travel health advice remains largely confined to academic papers' conclusions and recommendations but is of limited relevance to the travelling public. As part of the research process and reporting, researchers interpret their results by stating what they think may be the particular reasons for a result, e.g. lack of knowledge. People can talk. Why don't we ask them why they don't know?

It is not the experienced climbers and trekkers who are a worry, it is the masses that underestimate their tour and overestimate themselves. It is unknown how many of those thousands of trekkers I observed had consulted a health professional. Among the studied contact lens wearers, approximately 60 percent did not seek any advice. It is also unknown if what I observed was due to lack of consultation, non-compliance, carelessness or ignorance. For whatever reason, people are putting their own health at risk, and risking the lives of guides and rescuers. Somewhere, travel medicine is not making its mark.

There are two distinct groups of people in travel medicine: 1) the travel health professionals and 2) the travellers for whom this specialty was created and who are supposed to be the beneficiaries. The only point of contact between the two seems to be the pre travel care of those select individuals who choose to visit a clinic or GP or get post-travel treatment. After a quarter of a century of study, research, teaching and practising travel medicine, and all the publications and conferences, there should be a more visible impact on the public's travel health literacy. An appreciation appears missing of the need to safeguard one's own health and that of others when travelling to certain regions or pursuing certain activities. Travel medicine is not confined to a clinic or general practice where travellers with more insight seek care. The profession has an obligation to create awareness and provide information to the wider general public, especially in countries where the opportunity for international travel is more recent. Travel medicine is not doing this very well. Displaying brochures in surgeries is not sufficient. Rather, there needs to be, for example, regular coverage in the popular media, from newspapers, magazines, radio and television to social media, about the need to see a health professional before travelling to certain destinations. This message needs to be clear, unambiguous, correct and frequent (J Travel Med 2005, 12, 45-52). As

a result, the public should see the consideration of travel healthcare as an essential part of travel preparations, not a frivolous irrelevance and futile expense.

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What can we do?

Just deploring a situation does not change it, so how can travel health professionals contribute to improving the public's acceptance of travel health advice? The notion of health literacy has been mentioned earlier and forms the umbrella concept for the following recommendations. It is 'linked to literacy and entails people's knowledge, motivation and competences to access, understand, appraise, and apply health information in order to make judgments and take decisions in everyday life concerning healthcare, disease prevention and health promotion to maintain or improve quality of life through the life course' ([BMC Public Health 2012, 12, 80](#), page 3).

My first recommendation targets contemporary travel medicine education. To respond to the steady expansion of the specialty, travel medicine courses, but also shorter continuing professional development (CPD) updates, should include subjects such as tourist psychology, contemporary health education, a broader range of research approaches and methods, and basic aspects of tourism - perhaps even geography. Second, travel health practitioners (doctors and nurses) should utilise a wide array of creative options to educate the public. This can be as modest as one practitioner writing a weekly column in a local newspaper to large scale approaches designed and delivered by teams. Utilising the power of messages conveyed by school children to their families, age-appropriate talks - preferably weeks before the next school holidays - instil the importance of travel health care from a young age. This may mean an additional workload but educating the public is part of our remit as health professionals. Practitioners can also cooperate with researchers in identifying topics in need of investigation or conducting projects. Third, researchers are called upon to continue producing evidence for more consensus on advice and prophylaxis but much more research is needed, with a particular emphasis on travellers, on transport, and at destinations. This requires research away from clinical settings and surgeries to where the tourists are. One option is research at destination airports, capturing travellers right after their stay (*J Travel Med* 2015, 22, 124-12). Finally, travel medicine journals should expand their current submission categories to accommodate the sorely needed discussion on professional development topics within the specialty.

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Final thoughts...

Until we start looking at travel also through the eyes of the traveller, there will be no end to disappointed authors reporting poor 'KAP' and a failure to seek health advice. Much of travel medicine overlaps with tropical medicine or other medical specialties. The 'travel' part in travel

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medicine must include a much better understanding of the traveller so that the mission to promote healthy and safe travel meets with greater success.

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