Salena Ringenbach

Himalayan Health: Mountains and Medicine

Dr. Joseph Alter and Akshay Shah

June 10, 2019

Life and Health in India and the US

 People often speak of the immediate sensory overload which occurs the moment a person enters India for the first time, and I had the distinct pleasure of experiencing this first-hand. Arriving in the Delhi airport, I was struck by the heat and humidity as I stepped off the plane, the crowds and lines of people at customs and baggage claim, the smells and foggy horizon as we walked to our bus, the sounds of horns beeping on the hectic roads, the animals freely roaming the streets, and nearly every sight contained some element of surprise and curiosity. It was clear even from these first few hours in India that life was different here, and in a broad sense, health is an expression of life. From my experiences and observations in Mussoorie, India, I have come to understand that health is much more complex than just a biological status. It is a summation of many factors including nature, culture, religion, and politics.

 One of the most important determinants of health and lifestyle is the surrounding natural environment. Mussoorie is situated in the Northern state of Uttarakhand in the Himalayas. The extreme conditions in this region present unique challenges to life. The Himalayas are the youngest mountain range in the world which means that their geography is still unsettled. There are three fault lines which make the region highly seismic and vulnerable to disasters such as landslides and earthquakes. The annual monsoon season brings constant torrential rains for about 2-3 months between July and September. The different altitudes and climates of the mountains contain an incredible amount of biodiversity with thousands of species of flowers, trees, birds, butterflies, and other characteristic wildlife such as leopards and monkeys. Additionally, there are many major rivers which originate from the Himalayas and flow through India and surrounding countries, including the Ganga, the Indus, and the Brahmaputra. These rivers are of great significance as water sources for drinking, as irrigation for agriculture, and as sacred confluences in Hindu mythology.

 Life in the mountains has had to adapt to all of these conditions, and adaptations continue to be required as the climate changes. A good example of this intimate and dynamic relationship between the people and the environment is the agriculture of the region. India has a largely agrarian economy with about 70% of the population involved in agriculture. In the Himalayas, the steep mountains present an obvious obstacle to traditional farming, but this has been combatted by the creation of terraces. These terraces make farming feasible, but they have also created their own issues by depleting soil and collecting run-off. The harvesting season must be planned carefully around the onset of monsoon season. Over the last several decades, the duration of monsoon season has been shortening; however, the amount of rainfall has remained fairly constant. The force of these heavier rains disrupts the soil more, causing greater erosion and less opportunity for moisture to seep into deeper stores below the surface. Those who rely on farming on the terraces and in the valleys are keenly aware of the changes in the environment since their livelihood is directly dependent on the fertility of the land.

 Transportation is another important area of adaptation to the mountainous environment.

Narrow, curvy roads which cut across the mountain like switch-backs allow easier, though sometimes quite harrowing, transportation between the peaks and valleys. The seismic activity of the Himalayas makes these roads even more dangerous and damaging to the environment with the increased potential for landslides which erode the mountain’s surface and are hazardous for drivers. Although these roads have limited regulation and safety precautions, they make life a little easier for people with a car, a motorcycle, or the money to order a taxi. In addition to motorized transportation, walking is a central part of daily life in the mountain towns and villages. Posted on a tree along the side of the road, I found a sign which read, “Above all to not lose your desire to walk every day. I walk myself into a state of well being and walk away from every illness. I have walked myself into my best thoughts and I know no thought so burdensome that one cannot walk away from it… But by sitting still, and the more one sits still, the closer one comes to feeling ill… if one just keeps on walking, everything will be alright.” This quote shows that walking is not only a necessary form of transportation for many people, but also it is viewed as vital to living a healthy life in both mind and body.

 In the United States, the environment has just as much of an effect on population health and lifestyle; although in our fully industrialized society, it is often the built environment which we interact with rather than the natural one. While the US covers a large, diverse area, it is safe to say that in most regions the environmental conditions are much milder than in the Himalayas. We do not face such high elevation, unsettled earth, monsoons, or flooding. Our infrastructure including roads is much more regulated, and our agriculture is highly commercialized. Most people in the US have adapted to a lifestyle characterized by comfortability and abundance. Grocery stores are stocked in every town, and people spend most of their time indoors. While this degree of separation between us and the natural world around us has the benefit of alleviating concerns about safety and food security, it can also have damaging effects by diminishing our connectedness with nature and making the effects of climate change seem distant.

Transportation in the US has also been adapted to maximize comfort, convenience, and safety. Paved roads with regulated traffic patterns exist between almost any origin and destination you could wish to reach. Even for short distances, people drive their personal vehicles everywhere. In cities, public transportation options are also popular, but individually-owned cars still jam the streets. Walking is not deemed to be a very practical mode of transportation anymore in most towns. It is regarded as a healthy form of light exercise, mostly among the older population, but it is not valued as highly as it is in India. To many, having to walk somewhere can be viewed as a burden rather than a beneficial use of time.

 These aspects of daily life shape the basic health and relative levels of risk and prevention for disease within each community. If, as a result of all or some of these factors, a person becomes ill or injured, the forms of institutionalized medicine and treatment options available also differ significantly between India and the US. In India, there is a great variety of options in both treatment type and price. Biomedicine is certainly the most common practice, but alternative medicines are also very prevalent. These alternatives are institutionalized and funded through the Ministry of AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha, Homeopathy) within the Indian Government. Ayurvedic medicine is based on humoral theory which promotes the idea that health and illness and determined by a balance of three bodily substances (wind, bile, phlegm) which symbolize three natural elements (air, fire, wind). These three humors are traditionally called Vata, Pitta, and Kapha, respectively, and they are believed to be in constant fluctuation with each other. Therefore, health is a relative spectrum of humoral balance and imbalance, not a binary concept of healthy or sick. Within Ayurveda, there also exists a spectrum. There are specialized hospitals with Ayurvedic physicians who are fully trained in biomedicine in combination with Ayurvedic diagnostics and treatments. On the other end, there are road side clinics where the practitioner has not been formally trained, but claims legitimacy based on family lineage or spirituality. Ayurvedic practices are closely tied to the cultural and religious beliefs and traditions of the Hindu people. Similar to Ayurveda, Unani medicine is also based on a humoral approach to the body. However, Unani recognizes four humors and originates from Greece where it was picked up by Arabs and aligned with Muslim practices. Yoga has also been institutionalized as a form of medicine under the belief that by manipulating the subtle dimension of the yogic body one can affect the biomedical body. A final unique alternative medical practice found in India is Nature Cure which believes that nature alone can be used to cure all diseases and alleviate all symptoms. Nature Cure originated in Germany and relies solely on the use of earth, sunlight, air, and water for treatments.

 In the US, alternative medicine is traditionally viewed as quackery in comparison to the superior biomedical approach. Our society places a great deal of value on the objective qualities of scientific research and judges efficacy based on similar measures. However, some forms of alternative medicine are on the rise as suffering people face the limitations of biomedicine. For diseases without cures, such as cancer, some people are willing to try anything that might make them better including herbal treatments and yoga. Although the use of alternative medicine may be increasing, it is typically still viewed as a last resort after exhausting all biomedical options. The major difference between the attitudes of Americans and Indians towards alternative medicine stems from different ways of defining health. In the US, our perspective is rather binary. You are considered healthy until you get sick. However, for many in India, especially those who practice humoral based medicine, health is a relative balance which can be improved or worsened by the things you do and consume. Therefore, to an American, alternative medicine is not effective unless it can cure your ailment. While to an Indian, any slight improvement, even just in mood or feeling, may justify that the treatment is effective.

 Not only are the types of healthcare options very different between these two countries, but also the entire structure of how healthcare is accessed and delivered differs greatly. In India, there are two main sectors of healthcare facilities: public and private. The Government offers healthcare as a service to all at almost no cost at the public hospitals and institutions. I had the opportunity to visit a government-run hospital in Dehradun called Shri Guru Ram Rai with a family friend. We got to see their emergency room, general patient wards, intensive care units, and some other departments. The hospital was fairly large and provided all of the same types of services one could find in the US, but there were many stark differences. The building itself was much less polished and sanitized. The hallways were dim, and there was no air conditioning. Many of the staff members were wearing open-toed shoes or, in some cases, no shoes. India also has no strict patient privacy agreement so multiple patients are seen in the same room without even a curtain for separation. While the patients’ sensory experience in the hospital is quite different, the quality of the treatment they receive is on par with most US institutions.

 These government hospitals offer good service for just a small copay, but patients could also seek care from a great variety of private hospitals. I had the opportunity to visit two very different private hospitals in India: Landour Community Hospital and MAX Super Specialty Hospital. The Landour Community Hospital was founded by Christian missionaries and is still run by an entirely Christian staff. It is a relatively small hospital that mostly services a subset of the Mussoorie and Landour community. The administrative head of the hospital is Dr. George Clarence, an orthopedic surgeon by training. Dr. George spoke with us in class about the Indian healthcare system, and then we had the opportunity to shadow his work. In the hospital, I was able to help remove stitches from a man’s foot who had been in a motorcycle accident, observe a full patient assessment on an older woman who was later diagnosed with a tick-borne illness called scrub typhus, and sit in on several typical patient visits. Most of these activities were performed in a slightly less sanitary and less technologically advanced way, but still the doctors received the information they needed and adequate care was provided. For example, their system of drawing blood is quite different as they do not have the vacuum-controlled needles we use in the US. Instead, to control blood flow, the provider simply occludes the vessel upstream with his/her thumb and then releases to allow blood to flow into the tube. The facilities of LCH seemed to be nicer than those at the government hospital we visited, but LCH was also much smaller and lacking in other areas. For example, their staff cannot cover all specialties so often they have to bring in other surgeons and specialized physicians or refer patients elsewhere if they are unable to treat them effectively.

 MAX Super Specialty hospital is at the extremely high end of the spectrum when it comes to private hospitals. It is actually a chain of hospitals throughout India. The facilities are completely on par with or even exceeding what I have seen in hospitals in the US. They offer luxurious accommodations and high quality treatment for all specialties within medicine. The inpatient suite rooms are very clean and spacious. An interesting phenomenon that occurs at these hospitals is known as medical tourism. Essentially, foreigners, predominantly from the Middle East but also Western countries, who need some form of treatment or operation will travel to an Indian hospital such as MAX to receive equivalent or better care at a lower cost than in their home country, including travel costs. These hospitals can be so luxurious that it is like an unconventional vacation for these people. This is a growing business in India since they can offer quality healthcare services at a much lower cost than elsewhere in the world.

 In the US, there also exists a spectrum of quality and care amongst the hospitals, but there are some general features which differ greatly from the Indian healthcare facilities. The most striking difference to someone who is used to being in an American hospital is the lack of privacy. In the US, the HIPAA (Health Insurance Portability and Accountability Act of 1996) regulations provide great protection of the patient’s medical history and privacy both within and outside of the hospital. Patients are kept in separate rooms or at least have a curtain of separation between them, and medical information is not disclosed without the patient’s consent. The other major difference is the cost to the patient. In the US, there is no institutionalized universal healthcare service provided by the government. Citizens must have their own health insurance plan in case of emergency, and even so, many things are not covered or only partially covered by insurance, resulting in astronomically large healthcare bills for people who require extensive care. Our system is largely profit-driven while in India, healthcare is essentially free and thereby driven by need.

Another important consideration when comparing India and the US is the population. While discussing any issue in India, related to healthcare or not, the phrase “but the sheer population” was almost always used. India is home to about 1.37 billion people which is 17.4% of the global population. Meanwhile, India is only 3,287,469 square kilometers which is about 2.2% percent of the Earth’s total land area. For reference, the US is three times larger than India and has 995 million fewer people. This means that the population density is huge and makes even seemingly simple problems overwhelmingly difficult to manage.

When asked his opinion of what is the most dire and urgent need within the Indian healthcare system, Dr. George’s response was “the heart”, and I think that this is an unfortunate and important similarity between India and the US. In India, about 30% of positions within healthcare facilities remain unfilled. Dr. George said that the vacancy rates are not because India has a lack of doctors, nurses, or other healthcare professionals. Rather, it is because they lack the heart or motivation to go and work where there is the most need. Most doctors have their own families to look after as well so why would they want to settle down in a remote village which greatly needs access to medical care, but has no good schools for the doctor’s children or enough food and water access to adequately feed their family. This is a big reason for why poorer, remote villages, of which there are many, have difficulty accessing quality healthcare. We had the chance to help with a village clinic one day with Dr. George, and we saw 88 patients in just a few hours. Many of them got prescriptions for multivitamins, cough syrups, and other medications we had available. However, these outreach clinic days are few and far between for the people of the villages since there are so many small villages scattered throughout the mountains and not enough doctors with the time or supplies to visit each frequently. While healthcare services may not be costly for them, they are still very difficult to access, especially when they have other things to take care of such as their crops.

In the US, we also have a problem of the heart and accessibility as many of the people who need healthcare the most, including poor and marginalized populations, are unable to receive care because they cannot afford insurance. In our profit-driven system, even if we can save the person from their trauma or disease, there is nothing we can do to protect them from the potentially damning hospital bills. People who have serious symptoms may refuse to seek care or put it off until the problem becomes critical because of the burden of healthcare bills. The US healthcare system needs to be reformed so that quality care can be provided as a service rather than a good.

 Clearly, the healthcare systems within India and the US differ greatly, and life in each country has adapted to the burdens and benefits of each. However, I think that each lifestyle and healthcare system has something to learn from the other. Residents of the US could adopt a more active lifestyle by at least walking regularly and become reacquainted with the natural world around us to increase conservation efforts and environmental health. We also should find ways to reform our healthcare system so that it is affordable and equally accessible to all. As a developing country, there are many fundamental levels of organization and regulation within healthcare in India which could be improved by adopting some US practices, for example our emergency response system and sanitation standards. My experiences in India have truly opened my eyes to see lifestyle, health, and medicine in a much broader global context and have helped me to understand more fully the complexities of healthcare services within different countries and cultures.