

Modern medical education in Nepal

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Nepal is a small, mountainous, landlocked country in South Asia sandwiched between two giants, China and India. In most dimensions, Nepal (around 500 km from west to east and 200 km from north to south) is small, but in one dimension, height, it has no parallel. The land rises from the sweltering plains of the 'terai' (at around 200 m) to the peak of Mount Everest (at 8,848 m, the highest point on earth) within a distance of 100 kilometres.

MODERN MEDICAL EDUCATION IN NEPAL

Nepal was opened to the outside world in the 1950s and at that time students mainly went to India for medical education. The Institute of Medicine (IOM) at Kathmandu was established in 1972 under Tribhuvan University (TU) and is responsible for training all categories of health work-

ers. The Indian government helped to found the BP Koirala Institute of Health Sciences (BPKIHS) at Dharan in 1993. The Manipal College of Medical Sciences (MCOMS), in Pokhara, the first medical school in the private sector, was opened in 1994.

NUMBER OF MEDICAL SCHOOLS

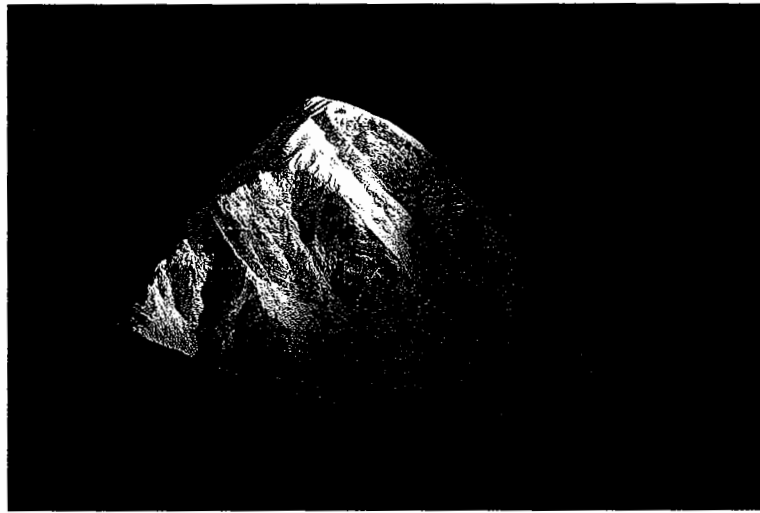
Since the mid-1990s, other private medical schools have opened, including two in the Kathmandu valley. Kathmandu University (KU), a private university estab-

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Mount Everest from Kala Pathar.

Fees for Nepalese students are low



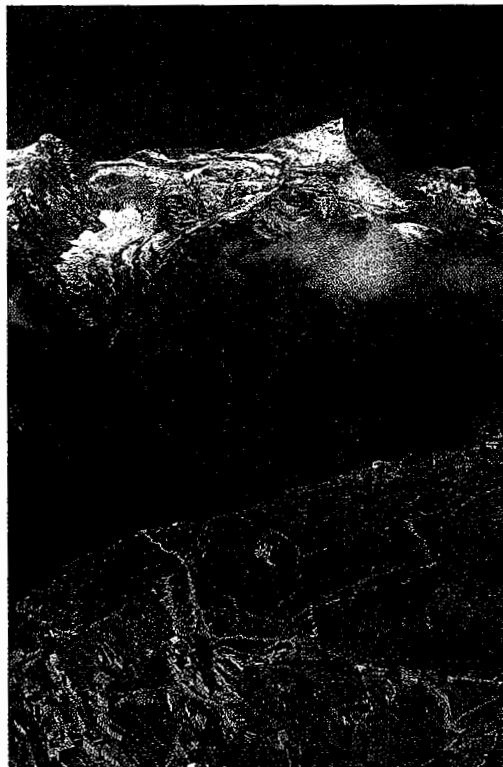
Sunrise on Mount Pumori.

lished under an Act of Parliament, has started a medical school in the beautiful hill town of Dhulikhel on the outskirts of Kathmandu. Medical schools are operational in Bharatpur, Bhairahawa, Nepalgunj, Birgunj, Janakpur and Kathmandu. There are a total of twelve medical schools in Nepal – two institutions offer only postgraduate courses – and it is planned to open three more schools very soon. IOM, BPKIHS, MCOMS and Kathmandu Medical College offer postgraduate courses in basic

sciences and clinical subjects, while the B & B Hospital, Kathmandu and the National Academy of Medical Sciences, Bir Hospital, Kathmandu offer postgraduate courses in clinical subjects.

FUNDING

IOM is funded by the Nepalese government, and the Japanese government provided assistance for the construction of the hospital and the college. BPKIHS, an autonomous institution, is funded



The Nepalese village of Namche.

jointly by the governments of India and Nepal. The private colleges are self-financing and do not receive government assistance. The fees for the MBBS course in the private colleges range from US\$23,000 to US\$60,000, depending on the student's nationality. Fees for Nepalese students are low. The college hospitals charge for their services, but concessions and even free treatment are available to poor patients and 'teaching cases'.

PERCEPTION AMONG PRACTITIONERS AND THE GENERAL PUBLIC

Perception on the whole is favourable. The hospitals provide quality healthcare services to local residents, while the presence of the students, faculty and other staff provide a boost to the local economy. However, doctors are worried that the increasing numbers of medical graduates will lead to tougher competition and shrinking job opportunities. A fear being voiced is that 'private' medical education will be beyond the reach of the majority (Nepal's annual per capita income is around US\$250), and there is some apprehension that students, after investing heavily in their education, will try to recover the money from their patients by increasing the cost of treatment.

STUDENT POPULATION

Students are admitted to the MBBS course after completing twelve years of schooling (studying physics, chemistry, biology and English in their last two years). IOM admits 44 Nepalese students and 16 foreign students each year, while the other colleges admit 75 to 100 students annually. MCOMS and Nepalgunj Medical College admit 150 students in two batches of 75.

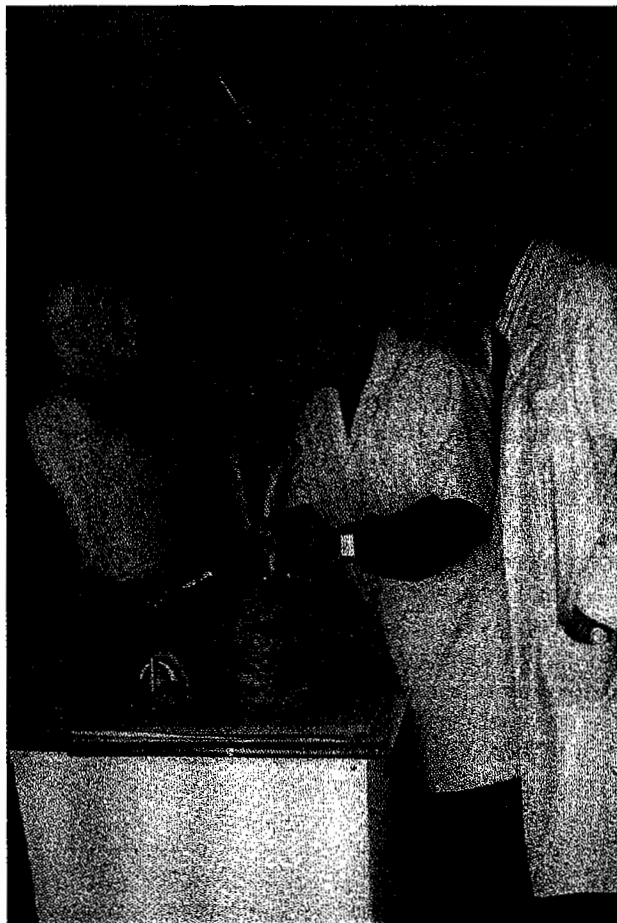
IOM and BPKIHS admit Nepalese students via an entrance examination. They also admit self-



Anatomy viva-voce in progress.

financing foreign students for undergraduate and postgraduate courses. In the private medical colleges, 20% of places are reserved for Nepalese scholarship students selected by the Ministry of Education through a separate entrance examination. The private schools under KU and TU select self-financing Nepalese students via an

entrance examination followed by an interview. The private colleges select Indian and foreign students on the basis of their twelfth standard (in India and Nepal the twelfth standard is the final year of school and is a basic requirement for degree courses. It is equivalent to A-level) and A-level marks.



Teaching in the clinical skills lab.

HOW AND WHAT THEY ARE TAUGHT

The four-year MBBS course (nine semesters) is followed by a one-year compulsory rotating internship. The first four semesters are devoted to basic science subjects (anatomy, physiology, biochemistry, pharmacology, pathology and microbiology). Community medicine is taught from the first to the seventh semester, and the last five semesters are devoted to clinical teaching. Otorhinolaryngology, ophthalmology and forensic medicine are covered in semesters five to seven. Medicine, surgery, paediatrics, and obstetrics and gynaecology are taught from the fifth semester onwards, but are emphasised in the last two semesters.

Teaching is integrated and organ-system-based. Students are taught through didactic lectures, problem-based learning sessions, practical demonstrations and seminars. Clinical case presentations and discussions and bedside teaching are used for clinical subjects. Clinical skills laboratories are available in a few colleges. There is no formal training in doctor-patient relationships, communication skills or medical ethics. Community teaching has an important role and is organised through regular community visits and 'family studies'. The colleges have peripheral health institutions attached for student training, and the students visit surrounding villages, where they study health problems in a community setting.

Nepal Medical Council (NMC) is the regulatory body for medical education and monitors student/faculty and student/patient ratios. NMC carries out regular inspections of the new colleges.

ASSESSMENT

Assessment of theory is mainly through short-answer questions.

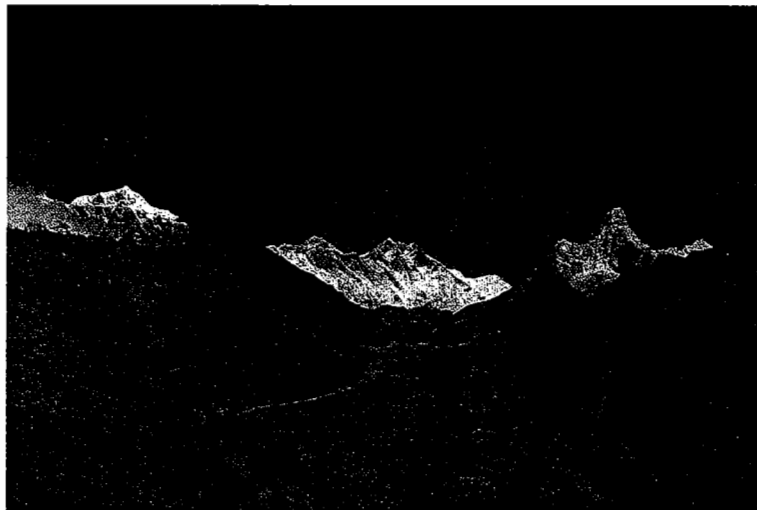
Nepal is now producing more than 600 doctors every year

Students from developed countries often do their electives in Nepal

Table 1. Website addresses of medical colleges in Nepal*

College name and location	Website address
Institute of Medicine, Kathmandu	http://www.iom.edu.np
BPKIHS, Dharan	http://www.bпкиhs.edu
MCOMS, Pokhara	http://www.manipal.edu/mcoms
NMC, Kathmandu	http://www.nmcth.edu
KMC, Kathmandu	http://www.kmc.edu.np
NGMC, Nepalgunj	http://www.ngmc.edu.np
NMC, Birgunj	http://www.nmcbir.edu.np

*Some of the medical colleges in Nepal do not have websites.



The Himalayan giants from Syangboche, Everest region.

Practical assessment in the basic sciences is by spotters (Spotters can be specimens, drugs, slides etc. which are to be indentified and attached questions are to be answered in a 3 minute period) and short exercises, and in clinical subjects by spotters (Spotters are clinical cases which can be diagnosed by inspection and a short clinical examination. Radiographs, instruments may also be given.), clinico-social cases, and short and long cases. Formative assessment is carried out regularly. Summative assessment in the basic sciences is carried out by the university at the end of the second and fourth semesters, and in clinical sciences at the end of the seventh and ninth semesters.

CHALLENGES

The new colleges face a shortage of skilled teachers. Private practice by the faculty was not allowed in most colleges, and experienced doctors were unwilling to teach because of loss of income. Some medical colleges have started allowing private practice by faculty members. Therefore, in many colleges the faculty is largely drawn from India and staff turnover is high. The security situation and political uncertainty is another challenge in attracting and retaining faculty members. Some colleges have a weak infrastructure and are struggling to cope with the NMC's regulatory requirements. An ade-

quate patient load is a problem in a few teaching hospitals. Patients do not have the capacity to pay for treatment, and many (especially from rural areas) are not aware of the treatment options available.

LESSONS FOR OTHER COUNTRIES

Nepal is now producing around 250 doctors every year at no cost to the national exchequer. Similar privatisation may solve the resource dilemma in developing countries and help them to build medical colleges and teaching hospitals.

Students from India, Sri Lanka and other countries come to Nepal to study MBBS and postgraduate courses, and 'medical education tourism' is earning the country a substantial amount of foreign exchange.¹ Other countries are opening medical colleges to attract foreign students to their shores but, drawn by the majestic Himalayas and beautiful scenery, students from developed countries often do their electives in Nepal. Electives can be a source of foreign exchange and the students may act as future goodwill ambassadors.

Efforts should be concentrated on training Nepal's indigenous population. A strong regulatory body is mandatory to ensure high standards of medical education. The closing decades of the twentieth century saw medical education in Nepal come of age. Let us hope that the twenty-first century will see 'world class' medical education taking firm root in the highest country on earth.

REFERENCE

1. Editorial: Medical Education Tourism in Nepal. *Journal of Nepal Medical Association* 2004;43:1.