

DRAFT, MAY 2007

NEW YORK STATE EDUCATION DEPARTMENT

Report of a visit to

Manipal College of Medical Sciences
Pokhara
Nepal
December 3-19, 2006

And

NY Affiliate
Wyckoff Heights Medical Center
Brooklyn, NY
April 30, 2007

Introduction

The objective of the site visit was to evaluate the preclinical component of the program of medical education at the Manipal College of Medical Sciences, Pokhara, Nepal, and the clinical component of the university's program of medical education that takes place in New York State. The major purpose of the visit to the campus in Pokhara, Nepal was to assess that part of the university's program of medical education, primarily the basic medical science that prepares students for clinical training. The purpose of the review of Wyckoff Heights Medical Center was to assess the clinical training offered to medical students in affiliated New York State health care facilities.

The Team

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Albany, NY

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Professor of Clinical Preventive Medicine
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Vice President of Medical Affairs and
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Benedictine Hospital
Kingston, NY

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Prof. of Medicine, Associate Dean, Moffitt
Cancer Center
Tampa, FL

The four consultant members of the visiting team have substantial experience in medical education. All hold or held professorial or administrative rank in United States medical schools.

Activities of the Team During the Evaluation

The team members reviewed individually all of the materials provided by the university prior to the visit. These included the Data Base Document, the appendices to it, student and faculty records and curricular materials, and various informational handouts and power point presentations distributed during the site visit. The team inspected academic and hospital facilities in Nepal and affiliated hospital facilities in New York State. The team members interviewed administrative officers, faculty members, support staff, and students in Nepal and in the New York State clinical affiliate. On the basis of these activities, the following observations related to appropriate sections of the Guidelines for the Evaluation of Medical Programs are presented with the respect to the program of medical education offered by the Manipal College of Medical Sciences, Pokhara, (MCOMS) Nepal.

FOREWORD

In March 2006, the University contacted the Department to discuss the approval of the College of Medical Sciences for the purpose of placing students in clinical clerkships in New York State beyond 12 weeks duration. Later in 2006, the University requested that an evaluation of its medical education program be undertaken.

The University states that the charter for the School of Medical Sciences was granted by the Ministry of Education and Culture, His Majesty's Government, Kathmandu, Nepal and Kathmandu University, Dhulikhel, Kavre, Nepal.

The University states that the governing board of the College of Medical Sciences comprises the following:

MEMBERS OF THE GOVERNING BOARD

1. **Dr RAMDAS PAI, CHAIRMAN, MEMG NEPAL LTD.**
2. **Mrs VASANTHI R PAI, MEMBER, GOVERNING BOARD, MEMG NEPAL LTD.**
3. **DR RANJAN R PAI, CEO, MEMG INDIA PVT.LTD.**
4. **Mr LABH PRASAD TRIPATHI, REPRESENTATIVE, MINISTRY OF EDUCATION**
5. **Dr HARINATH ACHARYA, REPRESENTATIVE, MINISTRY OF HEALTH, HMG**
6. **Dr SITARAM ADHIKARI, REGISTRAR, KATHMANDU UNIVERSITY**
7. **Mr DIRGHA RAJ KOIRALA**
8. **Dr HEMANG DIXIT**
9. **Lt Col (Retd.) PS SHETTI**
10. **Mr V RANGARAJAN, FINANCIAL CONTROLLER, MEMG**
11. **Dr SK DHAM, CEO (MEMG NEPAL LTD.) & DEAN (MCOMS)**

HISTORY OF THE COLLEGE OF MEDICAL SCIENCES

Established in 1994, the Manipal College of Medical Sciences, Pokhara is affiliated to Kathmandu University. The College is the result of collaboration between the Manipal Group and the Government of Nepal.

The College is listed in the 7th edition of the WHO Directory of Medical Schools and the International Medical Education Directory of Educational Commission for Foreign Medical Graduates (ECFMG) which holds the United States Medical Licensing Exam. MCOMS has also been accorded recognition by the Nepal, Sri Lanka, Bangladesh, Mauritius and the Indian Medical Councils. MCOMS first enrolled students in December 1994 and currently functions from two campuses in Pokhara City:

THE BASIC SCIENCES (THE DEEP CAMPUS)

The densely wooded Deep campus houses the basic science departments. The students do the first four semesters of the MBBS course in the Deep campus. The campus is residential and reverberates till late at night with the voices, laughter and joie d' vivre of the young students. There has been an increase in the capacity of admissions into MCOMS to 150 seats every year from earlier 100 seats w. e. f. August 2003. The intake has been split into two batches of 75 students each, one admitted in August and the other in February. The Deep campus, spread over eight acres of land, houses the basic sciences departments along with one library, four

lecture halls, dissection hall, museums, skills laboratory, seminar rooms, and laboratories for the basic science subjects.

THE CLINICAL SCIENCES (THE PHULBARI CAMPUS)

The Phulbari campus has a dramatic location by the banks of the Seti River which carves out a Grand Canyon right through the heart of Pokhara. The students do the clinical phase of the course (fifth to ninth semesters) at the Phulbari campus. Training is also provided for nursing, laboratory technician and other allied health sciences courses. The 700 bed capacity Manipal Teaching Hospital (MTH) is a seven storey building with a total built up area of 500,000 sq ft. It is a magnificent edifice, blending modernity with traditional Nepali style of architecture. MTH is situated on a 30 acre plot at Phulbari. The hospital has modern support service with modern diagnostic facilities.

MTH is an excellent health care delivery centre for the region with a good mix of secondary and tertiary level medical facilities. The quality of service provided is of an international standard. MTH has been constructed with a futuristic approach laying emphasis on the space required for teaching programs for undergraduates, postgraduates and allied health manpower.

MISSION, GOALS, AND OBJECTIVES

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To achieve global leadership in human development and excellence in education and health care.

MCOMS' MISSION

- To be among the most preferred destination for students and teachers of health sciences at all levels of medical education in Nepal by 2007 AD; and
- International bonding to achieve all round recognition for excellence in health care delivery among Southeast Asian Nations by 2010 AD;

Goal

To achieve acceptance of MCOMS as an excellent learning centre and dependable and affordable healthcare provider in Nepal

Objectives

- To establish MCOMS as an institution sensitive to the health needs and expectations of all sections of the people of Nepal
- To establish MTH as the best women and children friendly hospital
- To establish adequate research infra structure – both hospital and community based- for effective practice of evidence based medicine in MTH
- To establish and maintain strong working relationship with all health care and social welfare organizations in Nepal to optimize mutual institutional support and community benefits

- To widen further the partnership base and to establish firmly the social commitment of the institution in the provision of health services, along side excellence in education and research.

Academic independence (by written charter)

Manipal College of Medical Sciences (MCOMS) is a constituent member of the Manipal Education and Medical Group (MEMG) – headquartered at Bangalore, India. The head of the institution is also the Chief Executive Officer (CEO) of all MEMG educational interests in Nepal.

The CEO reports to the Corporate Office at Bangalore and enjoys complete independence in the administration and financial management of the institution.

Academic Autonomy (written policy)

In order to achieve operational excellence in Medical Education at all levels and to provide hospital and community based services, all the functional arms of the institution enjoy complete autonomy and budgetary support.

SIGNIFICANT ACCOMPLISHMENTS

31st December '94:	Classes for the 1st batch of MBBS students commences after receiving Provisional recognition by Nepal Medical Council and Provisional Affiliation by Kathmandu University
1997:	Listing in the 7th edition of WHO world directory of medical schools

September 1998:	OPD Services in Manipal Teaching Hospital commissioned with support facilities.
January 1999:	In patient services commences in MTH.
June/ July 1999:	First batch of students appear for final MBBS Kathmandu University Exams
July 1999:	Permanent recognition by the Nepal Medical Council and Permanent Affiliation by Kathmandu University.
August 1999:	Permanent recognition by the Sri Lanka Medical Council.
October 2000:	Commencement of Post Graduation in basic sciences at MCOMS
2000:	Commencement of School of Nursing and School of Allied Health.
June 2001:	Permanent Recognition by the Medical Council of India
April 2002:	Listing in the "International Medical Education Directory" of ECFMG (Educational Commission for Foreign Medical Graduates), USA
April 2003:	KU-MEMG Medical & Dental PG Program commences in Manipal Hospital, Bangalore and other MEMG Hospitals in India.
August 2003:	Increase in the capacity of admissions from 100 to 150 seats per year & it has been split up into two batches of 75 students each, one in August and the other in February.

SELF-REPORTED AFFILIATIONS AND RECOGNITIONS

- An institution of the Manipal Education and Medical Group (MEMG), Nepal.
- Affiliated to Kathmandu University, Dhulikhel, Nepal
- Recognized by the Medical Councils of India, Nepal, Sri Lanka, Bangladesh, and Mauritius.
- Listed in the 7th Edition of the WHO Directory of Medical Schools
- Established 1994, first batch graduated 1999. Since then every year one batch has graduated. Most of the students have passed their postgraduate entrance exams / various international exams like Medical Council Exams of USA (USMLE), UK (PLAB), Australia, South Africa and Sri Lanka with commendable scores.

MCOMS Highlights

- Modern campus with expected conveniences.
- Up to date teaching aids and appropriately equipped labs.
- Motivated student body well prepared in academics and participants in co-curricular activities.
- Cross cultural exposure through students from different countries.
- Faculty with a high degree of professionalism, commitment and an ability to innovate and motivate.
- A curriculum that is programmed for holistic development with emphasis on positive attitudes.
- Teaching and learning methods designed to generate interest and raise levels of self confidence.
- Established systems of continuous academic evaluation and guidance.
- Competent and responsive administration.
- Manipal – A global campus

Manipal has invested five decades of work in the fields of education and healthcare.

Nepal - At Pokhara, medical and educational evolution is taking place within the Manipal College of Medical Sciences and Manipal Teaching Hospital.

- India

Manipal has set up professional colleges and hospitals across the country – in Manipal, Mangalore, Bangalore, Sikkim and Goa.

Ø The Manipal Hospital and Heart Foundation has been rated amongst Bangalore's best hospitals.

Ø About 70,000 students are currently enrolled in Manipal Institutions.

ADMINISTRATION

The database submitted prior to the site visit stated that the administration comprises the following positions and individuals: (See attached sheet)

CEO (MEMG NEPAL LTD.) & DEAN (MCOMS)

Dr S. K. DHAM

DIRECTOR ACADEMICS & EXAMINATIONS (MCOMS)

Dr. O. P. TALWAR

DIRECTOR STUDENT AFFAIRS (DEEP CAMPUS)

Dr P. P. SINGH

DIRECTOR STUDENT AFFAIRS (PHULBARI CAMPUS)

Dr V. M. ALURKAR

ADMINISTRATIVE EXECUTIVE

Mr. GAURAV YADAV for Dr S. K. DHAM, CEO (MEMG NEPAL LTD.) & DEAN (MCOMS)

DRAFT, MAY 2007

MANAGER FINANCE, MEMG NEPAL LTD

Mr. PANKAJ CHATURVEDI

MEDICAL SUPERINTENDENT, MANIPAL TEACHING HOSPITAL

Dr S. P. KAPOOR

The academic departments and the respective chairs are:

Anaesthesiology	Dr S. N. Bawa
Anatomy	Dr Supriya Ghosh
Biochemistry	Dr P. P. Singh
Biotechnology	-
Blood Bank	Dr Arnab Ghosh
Community Medicine	Dr S. B. Dixit
ENT	Dr B. N, Borgohain
Forensic Medicine	Dr S. M. Kare
Medical Education	Dr Sushil Kumar
Medicine	Dr V. M. Alurkar
Microbiology	Dr Y. I. Singh
OBG	Dr R. T. Awasthi
Ophthalmology	Dr S. P. Shrestha
Orthopedics	Dr N. K. Sinha
Pediatrics	Dr Anna Thapaliya
Pathology	Dr O. P. Talwar
Pharmacology	Dr Archana Saha
Physiology	Dr C. G. Saha
Psychiatry	Dr K. Ramesh
Radiodiagnosis	Dr P. K. Tiwari
Skin & STD	Dr Sanjeev Gupta
Surgery	Dr M. L. Panhani
TB & Resp. Diseases	Dr Sanjay Bansal and Dr P. V. Kishore

The College Committees, their membership and chair were designated in the database as:

<u>COMMITTEE</u>	<u>NAME OF CHAIRPERSON</u>
Curriculum Integration Committee	Dr Deepa Theodore

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Students Affairs Committee

Dr P. P. Singh

Ethical Review Board

Dr S. K. Dham

Mess Management Committee

Dr Jaydeep Rayapudi

Sports and Cultural Events

Dr Lalit Mohan

FACILITIES

The infrastructure of the College is described as below:

Infrastructure

Campuses of MCOMS

The Basic Sciences or the Deep Campus: There has been an increase in the capacity of admissions into MCOMS from 100 - 150 seats every year. This in turn has been split up into two batches of 75 students each, one in August and the other in January. The Deep campus, spread over eight acres of land, houses the basic sciences departments along with one library, two lecture halls, dissection hall, museums, skills laboratory, seminar rooms, and laboratories for the basic science subjects. Two Lecture Halls, each with a capacity to seat over 100 and supported by sophisticated audio-visual teaching aids - over-head projectors, slide projectors, LCD projectors are used by both batches of students in the basic sciences.

Phulbari: The 700 bed capacity Manipal Teaching Hospital (MTH) is a seven storey building with a total built up area of five sq ft. It is a building that blends modernity with traditional Nepali style of architecture. MTH is situated on a 30 acre plot at Phulbari. The out-patient services were inaugurated in September 1998 and in-patient services started in January 1999 with modern diagnostic facilities and support services. MTH is an excellent health care delivery centre for the region with a good mix of secondary and tertiary level medical facilities. The quality of service provided is of international standards. MTH has been constructed with a futuristic approach laying emphasis on the space required for teaching programs for undergraduates, postgraduates and allied health manpower.

Clinical Teaching - Learning Facilities

Manipal Teaching Hospital - 700 beds

Western Regional Hospital - 350 beds (MoU with WRH)
Green Pastures Hospital - 75 beds (MoU with GPH)
Regional TB Center (RTC) - Out patient facility
Didactic class room lectures
Clinical / practical training in wards / community visits / field training camp
Symposia / Seminars
Clinical meetings / Faculty talks / Guest lectures

Students per Class

There has been an increase in the capacity of admissions at MCOMS from 100 - 150 seats per year. This in turn has been split up into two batches of 75 students each, one in August and the other in February.

MCOMS Physical Infrastructure

- Phulbari, Pokhara leasehold: 25 acres area - constructed 3,58,546 sq.ft.
- Phulbari, Pokhara freehold: 5 acres area - constructed 5, 01,380 sq.ft.
- Deep, Pokhara, Basic Sciences Departments: 9.25 acres area - constructed 65,000 sq.ft.
- Deep Campus: The Campus houses the Basic sciences departments, library, lecture halls, dissection hall, museums, skills laboratory, seminar rooms & laboratories.
- Lecture Halls : 4
- Library with a seating capacity for 200 students with a reading room and a computer section
- Tutorial Room – 3 with a total capacity of 75
- Museum : Pathology ,Anatomy and Microbiology
- Practical Labs
 - Dissection Hall
 - Lab with projection microscope & 2 monitors
 - Biochemistry Undergraduate and postgraduate labs
 - Skills Lab
 - Physiology Lab

- Pharmacology Lab
 - Community medicine Lab
 - Pathology Lab
 - Microbiology Lab
 - Haematology Lab
 - Biochemistry Lab
- Seminar rooms and Laboratories are equipped with sophisticated audio-visual teaching aids, e.g. LCD Projector, Slide Projector, Over Head Projector, Laptops and television.

Administrative Buildings

1. The college office in the Deep Campus is the main administrative office. It comprises of the Reception, Principal's office, Office of the Controller of Examinations and Admissions Office.
2. The Accounts office is a branch of the main accounts in Manipal Teaching Hospital.

Residential Buildings

Girls Hostel old: Capacity (40)

Girls Hostel new: Capacity (68)

Provision of hostels for boys accommodating 100 students has been made adjoining the college.

Phulbari: In the 30 acre Phulbari campus is located the Manipal Teaching Hospital, clinical teaching departments, hostels for clinical students, play grounds and faculty houses. It is a modern campus in a very scenic location.

The out-patient services were inaugurated in September 1998 and in-patient services started in January 1999 with modern diagnostic facilities and support services. MTH is an excellent health

care delivery centre for the region with a good mix of secondary and tertiary level medical facilities. The quality of service provided is of an international standard. MTH has been constructed with a futuristic approach laying emphasis on future expansion required for teaching programmes for undergraduates, postgraduates and allied health sciences.

Phulbari Hostels: The Boys & Girls hostels (fully furnished, with attached bathroom & balcony) accommodate 480 students on a twin sharing basis. The basement holds a dining hall, indoor recreation hall, and communication facilities like Internet, fax & an auditorium.

Phulbari Staff Housing: 40 flats place the clinicians in walking distance of the Manipal Teaching Hospital, thus providing prompt patient care around the clock & learning experiences for students even after working hours.

The Libraries remain open all days including Saturdays & holidays from 9.00a.m. to 12.00midnight. The libraries also provide photocopying and internet services.

Since the college is functioning from a split campus, it has been necessary to duplicate the library facilities. The main library is at Deep with an extension at MTH to look after the needs of clinical students staying at Phulbari.

Star Attraction

In the 30 acre Phulbari campus is located the Manipal Teaching Hospital , an edifice, bordered on one side by the Seti river, a backdrop of forest covered hills and a view of the snow covered mountains, makes it a unique environment for learning. From the moment you step on the campus, you will sense there is something special about MCOMS. The Academic and other activities, staff and students, surroundings and support that you will find here, all add up to an

environment where you will be challenged to move ahead. With the variety of cultures that you can experience through our international environment, you will learn a great deal about what it is to live and compete in a global society. If you are looking for an excellent, personalized education to become a world class doctor, then you should consider joining MCOMS.

MCOMS Faculty

The faculty at MCOMS is full time and residential. They are not allowed private practice hence they are totally devoted to their roles as teachers and clinicians. Faculty appointments are made in consonance with the norms and standards of Kathmandu University and Nepal Medical Council. Teaching designations and promotions are also as per criteria laid down by these regulatory bodies. Most of the teaching faculty at MCOMS is from India due to a tremendous shortage of qualified faculty in Nepal. Efforts are being made to increase the Nepalese teaching faculty. Advertisements for specific posts as well as for the posts of professors, associate professors and assistant professors in Basic and Clinical Sciences have been brought out in the local newspapers and British Medical Journal.

BUILDING NAME	YEAR COMPLETED	NET USABLE Sq. MTRS	LOCATIO N IN SQ.MTRS	LOCATION IN REF. TO MAIN CAMPUS	FUNCTION
MANIPAL COLLEGE OF MEDICAL SCIENCES (DEEP CAMPUS)	1994-95	7,500	3,400	3 KM AWAY	BASIC SCIENCES
MANIPAL TEACHING HOSPITAL (PHULBARI CAMPUS)	2000-01	65,000	1,22,000	MAIN CAMPUS	CLINICAL SCIENCES & HOSPITAL

Classroom teaching facilities

Name	Which Building	No. of Seats	Audio visual facilities Yes or No
MANIPAL COLLEGE OF MEDICAL SCIENCES (MCMS)	DEEP CAMPUS	4 CLASS ROOMS WITH CAPACITY OF 125 EACH	YES
MANIPAL TEACHING HOSPITAL (MTH)	PHULBARI CAMPUS	4 CLASS ROOMS WITH CAPACITY OF 150 EACH	YES

Clinical Teaching facilities

Hospital	Location	Number of Beds	Annual no of OPD visits (2005)	Annual no of ER visits (2005)
Manipal Teaching Hospital	Phulbari, Pokhara, Nepal	700	1,35,856	5,352
Western Regional Hospital	Ramghat, Pokhara, Nepal	350	75,000	
Green Pastures Hospital	Rambazar, Pokhara, Nepal	70	30,000	

TEACHING FACILITIES

Student laboratories comprise:

- Anatomy dissecting room
- Anatomy microscopic lab
- Cadaver tables: big 15 & small 5
- Student seats: dissection hall 190
- Microscopes: binocular 3, dissection 22, projection 1
- Biochemistry lab student bench spaces for 36 students
- Microbiology lab student bench spaces for 40 students
- Physiology lab student work seats for 40 students
- Pathology lab microscopes 23

Other

- Anatomy museum
- Pathology museum

Special teaching resources

- Medical photography and illustration no
- Electronics shop yes
- Computer, data processing yes
- Print shop yes
- Machine shop yes
- Audio visual – media viewing area yes

LIBRARY Mr. Arjun Shrestha is the head librarian and was appointed in 2004. He possesses a master’s degree in library sciences, and reports to the dean of medical school. The professional school that this librarian serves are the Manipal College of Medical Sciences and the School of Nursing. The library is open each day from 8:00 a.m. to 11:00 pm. The staff of the library comprises 1 FT professional Librarian, 1 Senior Semiprofessional Library Assistant, 5 Semiprofessional Library Assistants, 3 nonprofessional Library Assistants, 1 Junior Library Assistant, and 1 General Duty Worker. The Library circulates approximately 2910 books per month at the basic science library and 3200 books at the MTH library. The Library budget is approximately \$90,000/year.

The holdings of the library were reported as the following:

	Volumes end of year (31-03-05)	Volumes added this year (as of 09-02-06)	Serial titles received end of year 2005
Medical School or Health Centre Library	Purchased 6932 Gift 173, WHO 595 Bound Jnl. 1045 CD-ROM 175	257 76 35 130	598 issues of 77 titles

The library facilities were reported as comprising:

	Square meters	Seating Capacity
Reading area	1180 M ²	40
Stacks	520 M ²	15
Bound Volumes area	260 M ²	10
Computing Center	330 M ²	20
Technical Section	100 M ²	2
Library Annex	1936 M ²	125
Others	260 M ²	2
Manipal Teaching Hospital Library		
Reading area	2232 ft ²	125
Stacks	500 ft ²	6
Total floor area	4586 M ²	214

FACULTY

The basic science faculty is reported as having the following staffing:

Basic science	Professor	Associate Professor	Asst Professor	Instructor and other	Total full time	Part time (Paid)	Volunteer (unpaid)
Anatomy	5	-	3	2	10	-	-
Biochemistry	1	-	-	6	7	-	-
Microbiology	1	-	1	4	6	-	-
Pathology	3	1	2	3	9	-	-
Pharmacology	1	-	2	3	6	-	-
Physiology	2	-	3	3	8	-	-
Other basic sciences dept							
Specify :							
Basic Science totals	13	1	11	21	46		

The clinical science staff is reported as:

Clinical science	Full Time					Part time (Paid)	Volunteer (Unpaid)
	Professor	Associate Professor	Asst Professor	Instructor and other	Total full time		
Anaesthesiology	2			3	5		
Dermatology				1	1		
Family medicine							
Internal med	2	1	1	5	9		
Neurology	1				1		
Ob/Gyn	1	1	1	5	8		
Ophthalmology	2		1	4	7		
Orthopedics	1	1	1	1	4		

Otolaryngology	1		3	2	6		
Physical Med							
Pediatrics	1		2	2	5		
Public Health							
Prev. Med	2	-	4	5	11		
Radiology	1		1	1	3		
Surgery	1	5		1	7		
Urology							
Psychiatry	1		1	1	3		
Forensic Med	1				1		
TB & Chest		1	1		2		
Gastroenterology							
Cardiothoracic							
Nephrology							
Neuro Surgery							
Plastic Surgery	1						
Pediatric Surgery							
Other clinical depts.							
Hospital Adm				1	1		
Clinical totals	18	9	16	32	74		
Basic science & clinical Grand Total	31	10	27	53	120		

The MBBS curriculum is self described by the College as having the following components:

The objective of the Kathmandu University Curriculum for the MBBS degree is to groom a well-rounded medical graduate who on completion of five and half years of the undergraduate medical program will be competent to carry out the clinical, preventive and promotive roles expected of a physician. The curriculum is student centered rather than teacher centered; Problem based rather than information gathering; Integrated rather than discipline based; Community based rather than hospital based; Elective-oriented rather than standard program oriented; Systematic rather than apprentice based.

Undergraduate Teaching Program:

The four and a half years of the MBBS course has been divided into nine semesters, each of 6 months duration. The first four semesters are devoted to the basic sciences and the next five to the clinical sciences. Each semester consists of 20 weeks of 6 working days per week, 7 hours per day. On successful completion of the 4 ½ year MBBS course the student is to undergo one year of compulsory residential, rotating internship.

Basic Sciences (Semesters I-IV): Basic Sciences include anatomy, physiology, biochemistry, pathology, microbiology, pharmacology and community medicine. These subjects are taught in an integrated manner, system-wise. Some of the systems are covered in the first year, at the end of which there is a university examination in each subject. The rest of the systems are covered in the second year, at the end of which there is a university examination in all the subjects except community medicine which is continued up to the 7th semester. A student is required to pass all the basic sciences subjects before he/she is allowed to go into the Clinical Sciences (Semester V).

Clinical Sciences (Semesters V-IX): Clinical sciences include the subjects of general medicine, general surgery, obstetrics and gynecology, forensic medicine, community medicine, pediatrics, otorhinolaryngology (ENT), ophthalmology, orthopedics, dentistry, psychiatry, dermatology, radiology, anesthesiology, emergency medicine and other allied medical and surgical specialties and subspecialties. The III MBBS university examinations in ENT, ophthalmology, community medicine and forensic medicine are held at the end of the 7th semester. A student cannot be admitted to the IX semester until he/she has passed all four subjects. At the end of nine semesters are the Final MBBS university examinations in general medicine, general surgery, OBG and pediatrics.

From the very first semester the students obtain clinical exposure through hospital visits. Clinical training is conducted at the Manipal Teaching Hospital and associated local hospitals. Endeavors are also made to reach out to people in their homes. Periodically, a multi-disciplinary team of doctors, interns, students and allied health workers holds camps in rural areas. Interaction with the community is well established through regular field trips and adoption of local families.

In order to derive the maximum benefit from integrated teaching the student is expected to have 100% attendance in all the subjects. However the student should have not less than 75% of attendance, separately in theory and practical in order to be eligible to appear for the university examinations.

Basic Sciences: The teaching program in the Basic Sciences consists of the following:-

1. Didactic class room lectures
2. Practicals
3. PBLs / Seminars

4. Community visits / Hospital visits

Fortnightly academic time tables are prepared, giving details of the teaching program with topics to be covered. These are put up well in advance. To support the integrated approach, seminars and PBLs are conducted every fortnight on important diseases/ syndromes. This gives the basic science students a better clinical orientation of the systems being taught. Concurrent evaluation is done by fortnightly tests (FNT), viva-voce, seminars and PBLs. Examinations are held at the end of each semester.

Clinical Sciences: The teaching program consists of the following:-

1. Didactic class room lectures
2. Clinical / practical training in wards / community visits / field training camp
3. Symposia / Seminars
4. Clinical meetings / Faculty talks / Guest lectures

The above teaching sessions take an average of forty eight hours / week, out of which there are 12 didactic lectures per week. The stress is mainly on Clinical / Practical training. The students are periodically assessed by having end posting clinical exams (Clinical and Viva), mid-semester exams and end - semester exams.

Content of the Educational Program

Subject	Year					Location
	1	2	3	4	5	
Anatomy	P	P				MCOMS
Microscopic	P	P				MCOMS
Gross	P	P				MCOMS
Neuro	P	P				MCOMS
Embryology	P	P				MCOMS
Biochemistry	P	P				MCOMS
Nutrition	P					MCOMS
Physiology	P	P				MCOMS
Biophysics	P					MCOMS
Epidemiology	P	P	P			MCOMS
Biostatistics	P	P	P			MCOMS
Behavioral Science	P	P	P			MCOMS

Pathology	P	P				MCOMS
Pathophysiology	P	P				MCOMS
Microbiology	P	P				MCOMS
Pharmacology	P	P				MCOMS
Toxicology			P			MCOMS
Public Health	P	P	P			MCOMS
Preventive Medicine	P	P	P			MCOMS
Medical Jurisprudence			P			MCOMS
Human Sexuality	P	P				MCOMS
Alcoholism	P	P	P			MCOMS
Drug Abuse	P	P	P			MCOMS
Cost containment						MCOMS
Environmental Medicine	P	P	P			MCOMS
Intro. To Clinical Medicine	P	P	P			MCOMS
Intro. To Psychiatry			P	P	P	MCOMS
Physical Diagnosis			P	P	P	MCOMS
Clinical Diagnosis			P	P	P	MCOMS
Clinical Correlation			P	P	P	MCOMS
Clinical Pathology Conferences		P	P	P	P	MCOMS
Other:						MCOMS

Teaching Methodology and Student Group Size

Lectures	75
Lab Practicals	20
Demonstrations	20
Seminars /Discussions	10
Presentations by students	6 to 14
Bed side teaching	6 to 12
OPD teaching	10 to 12
Field Studies	6 to 12
Computer assisted learning	3 to 4 students per computer

DISTRIBUTION OF HOSPITAL BEDS IN MTH, WRH & GPH

Department	MTH	WRH	GPH	TOTAL
Medicine	170	45	10	225
Surgery	163	82	10	255
OBGY	53	97	-	150
Pediatrics	76	74	-	150
Orthopedics	33	32	5	70
Psychiatry	50	-	-	50
Ophthalmology	30	-	-	30
ENT	30	-	-	30
Dermatology	5	-	45	50
Dental	10	-	-	10

Casualty	30	20	-	50
Total	650	350	70	1070

POSTGRADUATE COURSES: Postgraduate courses are available in all the basic science subjects and some clinical subjects. The duration of the MD course is three years and the M Sc course is two years.

Internship

Internship is the phase of compulsory training, a medical graduate has to undergo at the completion of his Final MBBS Course, so that he / she becomes eligible for the award of MBBS Degree by the Kathmandu University and registration from the respective Medical Councils.

Duration of Internship: Duration of internship is one year and no exemption will be allowed even if the duration of MBBS course is prolonged beyond 4 _ years due to unforeseen reasons.

Aim: To improve professional knowledge and acquire adequate hands on experience and skills by participating in health care delivery under the supervision and guidance of qualified medical doctors. Generally internship must be carried out in medical institutions having enough man power, skills in management and plenty of training opportunities, so that the fresh graduates can enhance their medical knowledge. Hospitals in India, Sri Lanka and other SAARC countries may be recognized for internship on the basis of the recognition accorded to them by the respective Medical Council of those countries. Internship should preferably be

completed from the same country and same hospital.

At the end of the training the medical graduate should be able to:

- Identify healthy from sick and develop adequate skill to diagnose clinically and manage common diseases encountered in practice;
- Take timely decisions for referral to higher centers if need arises;
- Interpret laboratory data scientifically on the basis of clinical findings and take suitable decisions on management;
- Develop skills in basic medical and surgical procedures;
- Learn to use judiciously the laboratory services, infusion fluids, blood and its substitutes, drugs and other materials;
- Practice rational use of drugs using essential drugs;
- Learn the first level care of all types of emergencies – Medical, Surgical, Obstetric, Neonatal, Pediatric, Geriatric and Psychiatric;
- Learn to take precautions to protect oneself during patient care;
- Imbibe the spirit of National programs and participate actively in promotional and preventive health care activities;
- Comprehend administrative management skills and develop leadership qualities and learn to work as a team;
- Learn to communicate effectively with the patients, their relatives and the community at large; and
- Inculcate due professionalism by developing self discipline, determination and

dedication coupled with a sympathetic approach towards patients and their relatives.

Hospitals for Internship: Medical College Hospitals; Central, Zonal, Regional, District Hospitals; Corporate Hospitals; Specialized hospitals: Eye hospital, Mental health hospital, Child health hospital, Infectious diseases hospital, Maternity hospital, Orthopedic hospital etc. Community/ Mission Hospitals; Service Hospitals - Police / Army; and Primary Health Centers and Health Posts.

Internship Schemes: The Kathmandu University Internship norms are based on the guidelines of the Nepal Medical Council. The schemes have been evolved keeping in mind the needs of Nepalese, Indian and Foreign students. This enables them to meet the requirements / stipulations of medical councils of their respective countries. For students from Nepal any one of the four schemes 01 to 04 listed below is recommended. Since health services under HMG continue to be the major employer for doctors in Nepal, scheme No. 04 is recommended. The Interns may have to function as junior doctors in Health Services of the Country. Hence adequate exposure in tackling common health problems in the community and participation in National Community Programs is desirable. General Medicine and Surgery postings should include 15 days in casualty and 15 days in emergency services.

Internship Schemes

Scheme No. 01

Subject	Duration
General Medicine	3 months
General Surgery	3 months
Reproductive Health	
(a) Gynecology and Obstetrics	2 months
(b) Family Planning, Mother and Child Health	15 days
Emergency Medicine and Anesthesiology	1 month
(a) Ophthalmology and Otorhinolaryngology	15 days each
Or	
(b) Psychiatry	1 month
Pediatrics	01 month

Scheme No. 02

Subject	Duration
General Medicine	3 months
General Surgery	3 months
Reproductive Health	
(a) Gynecology and Obstetrics	2 months
(b) Family Planning, Mother and Child Health	15 days
Emergency Medicine	1 month
(a) Ophthalmology	15 days each
Or	
(b) Psychiatry	1 month
Pediatrics	1 month

Scheme No. 03

Subject	Duration
General Medicine and related subjects	6 Months
General Medicine	3 months
Infectious Diseases or Psychiatry	1 month
Pediatrics	2 months
General Surgery and related subjects	6 Months
General Surgery	3 months
Orthopedics	1 month
Obstetrics and Gynecology	2 months

Scheme No. 04

Subject	Duration
General Medicine	3 Months
General Surgery	3 months

Reproductive Health	
(a) Gynecology and Obstetrics	3 months
(b) Family Planning	
(c) Mother and Child Health	
Community Medicine	3 months

The total Electives (up to 4 subjects can be opted) not exceeding two months of internship.

Scheme No. 05 (For Foreign students)

Subject	Duration
General Medicine and related subjects	6 Months
General Surgery and related subjects	6 months
Electives of choice	

Scheme No. 06: For Indian Students as per MCI Rules

Compulsory Postings		Elective Postings (2 or 4 subjects can be opted for)	
Subject	Duration	Subject	Duration
Community Medicine	3 months	Elective Postings	1 month
Medicine	2 months	Dermatology	1-2 weeks
Surgery including Orthopedics	2 months	Psychiatry	1-2 weeks
Obstetrics and Gynecology including Family Welfare Planning	02 months	Radio-diagnosis	1-2 weeks
Pediatrics	15 Days	Tuberculosis and Respiratory diseases	1-2 weeks
Ophthalmology	15 Days	Blood Bank	1-2 weeks
Otorhinolaryngology	15 Days	Anaesthesiology	1-2 weeks
Casualty including Forensic Medicine	15 Days	Physical and Rehabilitation Medicine	1-2 weeks

Role of Supervisor and Intern:

An intern shall be allowed to treat patients only under supervision and he/ she shall not be allowed to work independently. Supervisor would mean a full time specialist or registrar of the corresponding department who has full responsibility of the intern.

At the end of the training in a department the intern should procure a completion certificate from the Head of department. The Head of department should clearly state whether

the training undertaken was satisfactory or not. If his/her work is not satisfactory then he/she is bound to repeat his/her internship in these departments. If dereliction of duty is observed he/she may be given a warning. If the same is repeated disciplinary action including dismissal can be enforced.

Restrictions: According to Section 29 of Nepal Medical Council Act, Interns are not allowed to certify birth or death or to sign and give certificates related to medical, physical or mental fitness. Interns shall not give narcotic formulations, in any form, to patients. Interns are not allowed to handle medico - legal cases or do post-mortems independently.

Leave: Twenty days leave may be availed during the entire tenure of internship. This may be combined with compensatory leave, if any. Maximum leave that may be availed at a time shall be 10 days.

Assessment of Internship: An intern shall maintain a log book of work done. This has to be verified and signed by the supervising doctor. At the end of the internship this record shall be counter signed by the head of the institution. The following aspects will be assessed - proficiency of knowledge, mode of documentation in case records, skill and confidence acquired during internship, attitude towards patients, colleagues and superiors, enthusiasm to observe, to assist, to participate and to perform independently, involvement in National Programs, communication skills and team spirit, leadership qualities.

Certification: At the end of the training the candidate, who is under going training outside

the parent institution should procure a certificate from the Head of the Institution regarding satisfactory completion of internship and submit the same to the principal of the parent institution. Based on this the Principal shall issue the certificate of satisfactory completion of internship and in turn the Kathmandu University shall award the MBBS Degree. The internship which has been completed outside the stipulated terms and conditions will have no validity

The site visit team observed that MCOMS's 5 ½ year medical education program follows the objectives of the Kathmandu University curriculum for the MBBS degree. The MBBS program which is approved by the Medical Council of India (MCI), provides medical education and training to its students spread over 4 ½ years (9 six-month semesters) followed by one year of compulsory rotating internship . The MBBS curriculum at MCOMS is delivered by way of didactic class room lectures, small group problem based learning (PBL), laboratory/practical training, bedside hospital and clinical experience, community /field visits, and training camps. The curriculum lays emphasis on integrated, problem and community based learning. Additionally, the curriculum and teaching methods remain flexible enough to meet the needs of the individual students as well.

The MBBS program is divided into two segments (professional periods of study) – 1) Basic Sciences (First and Second MBBS) and 2) Clinical Sciences (Third and Final MBBS). The first segment, i.e. the Basic Sciences education component is delivered during the first four semesters (First MBBS – 1st and 2nd semesters; and Second MBBS- 3rd and 4th semesters) of the program. The second segment i.e. the Clinical Science component is provided during the

following 5 semesters (5th – 9th semesters) of the program. Each semester is of 20 week duration with six working days a week, 7 hours per day. (20 X 6 X 7 = 840 hours per semester)

The Basic Sciences part (1st – 4th semesters) covers the subjects of anatomy, physiology, biochemistry, pathology, pharmacology, microbiology and community medicine. During this period of study students are exposed to introductory clinical topics. Also, there is clinical exposure by way of hospital and community visits during 1st -2nd semesters. In the Clinical Sciences part of the program, students undertake/undergo course work and training in general medicine, general surgery, forensic medicine, community medicine, pediatrics, obstetrics and gynecology, ENT, ophthalmology, orthopedics, dentistry, psychiatry, dermatology, radiology, anesthesia, emergency medicine, and other subspecialty clinical disciplines.

Basic Science (Pre-clinical) Education and Training

The First MBBS (1st and 2nd semesters) period of study orient and provide education to students in the subjects of anatomy, physiology, biochemistry, pathology, pharmacology, microbiology and community medicine. The subject matter is presented in an integrated fashion and covers only certain systems and topics. At the end of this period of study, students are required to take First MBBS University Examination. The examination covers topics presented during 1st and 2nd semesters. The Second MBBS period of study (3rd and 4th semesters) provides education in anatomy, physiology, biochemistry, pathology, pharmacology, and microbiology . The curriculum covers the remaining systems (not covered during the 1st and 2nd semesters). Additionally, there is ongoing exposure in community medicine. At the conclusion of this

segment, students take the Second MBBS University Examination in all basic science subjects except community medicine. Also, during this period of study students are also exposed to introductory clinical skills and various topics in clinical medicine.

Basic Sciences (1st – 4th semesters)

Anatomy education at SMIMS consists of a total 533 hours of exposure (Dean's presentation) in form of lectures, seminars, PBL, and practical/lab work during the 1st – 4th semesters. The department has a total full time faculty of 9 qualified professionals. The department has adequate dissection hall facilities (including cadavers), histology laboratory, museum and a laboratory with 22 mannequins. Students also have available to them bone sets and slides, Netter's Atlas including Adam's Practical and other models for self study and demonstrations. Projection microscope is also available.

Physiology education consists of a total of 294 hours of exposure (Dean's presentation) in form of lectures, seminars, PBL, and practical/lab work during the 1st – 4th semesters. (The department reported a total of 414 hours of exposure). The department has a total faculty of 9 full time qualified individuals. The MBBS curriculum covers a range of topics in general physiology and various aspects of different systems. The department has two well equipped laboratories in which students perform various experiments designed to study various physiological phenomena, and interpret and analyze results. Students also have an opportunity to see demonstrations on procedures/tests such as EMG, EKG and EEG .

Biochemistry education covers a total of 300 hours of exposure (Dean's presentation) in form of lectures, seminars, PBL, and practical/lab work during the 1st – 4th semesters. (The Department reports a total exposure of 364 hours). The department has a total faculty of 7 full time qualified professionals. The curriculum covers a broad range of topics in biochemistry. The department has its own laboratory where students perform various types of qualitative and quantitative analysis. The students are exposed to various tests and clinical experiments that are routinely performed in a typical biochemistry laboratory.

Microbiology education which occurs during the first semesters provides a total exposure of 197 hours (Dean's presentation) in form of lectures, seminars, PBL, and practical/lab work during the 1st – 4th semesters. (The Department reported a total of 400 hours of exposure). Topics covered in the course include general bacteriology, immunology, virology, mycology, parasitology and applied aspects of microbiology. There is a departmental laboratory in which students gain experience various techniques in identification and diagnosis of common infectious diseases and micro-organisms. The department has a full time faculty of 6 qualified professionals.

Please note: 1) Pharmacology and pathology departments were reviewed and inspected by members of the site visit team. 2) The number of training hours reported by the individual basic science depts. appear higher than that those reported by the Dean. It is not clear whether the hours reported by the department include self study and or optional extra-tutorials, or other activities. Clarification on this would be helpful.

Community Medicine – The department provides education to students for a total exposure of 300 hours of lectures, small group PBL discussions, field / community visits practical work during the first four semesters. There is an additional exposure of 380 hours during 5th- 7th semester. In the clinical rotation students undertake community work in the practice urban centers and clinics associated with College. Students are assigned specific families, which they visit at periodic intervals and follow over a period of time. Under the supervision of the faculty, students advise families on a wide range of issues concerning their health. Also, during this period students have an opportunity to visit industrial and environmental sites, social welfare organizations and get involved public health programs of national importance. The department has a lab/ museum with many charts and models, which serve as valuable teaching aids. The department has a faculty of 10 professionals.

All the basic science departments conduct written and practical examinations at periodic intervals. These include fortnightly tests, mid and end- semester assessments and sessional examinations. This allows the faculty to evaluate and monitor students' performance. Students performing poorly are given extra help.

The postgraduate courses (MD, MS and M Sc) are also offered by basic science departments. The faculty and post graduate students have a very strong interest in research. This is evident in the description of various research programs outlined in the MCOMS Institutional Profile 2005.

Clinical Education and Training

In the Clinical Science segment (5th – 9th semesters) students undertake/undergo course work and training in general medicine, general surgery, forensic medicine, community medicine, pediatrics, obstetrics and gynecology, ENT, ophthalmology, orthopedics, dentistry, psychiatry, dermatology, radiology, anesthesia, emergency medicine, and other subspecialty clinical disciplines. Students take two University Examinations in the clinical science period of study: Third MBBS examination, taken at the completion of 6th and 7th semester tests students on topics in ophthalmology, ENT, community medicine and forensic medicine; and Final MBB examination, taken at the conclusion of the 8th and 9th semesters tests them on medicine, surgery, pediatrics, ob/gyn, and other clinical areas.

The total numbers of prescribed hours of training in various clinical specialties were reported as below:

Clinical specialty	# of prescribed hours of education and training in 5 th – 9 th semesters.
General Medicine inc Psych and Dermatology	751
Surgery inc Dental and Radiology	722
Orthopedics	245
Obstetrics and Gyn	648
Pediatrics	506
Ophthalmology	200
ENT	200
Anesthesia	48
Forensic	80
Community Med	380
Integrative and electives	420
Total	4, 200

Students undergo clinical rotations (93 weeks) in specialties mentioned above in the affiliated hospitals namely, Manipal Teaching Hospital – MTH (700 beds), Western Regional Center (350

beds) and Green Pasture Hospital (70 beds). Additionally, the following clinical sites are also available to the students:

- Regional TB Center.
- Health services and programs under the Regional Director, Pokhara.
- Medical Center for the Gorkha ex-servicemen.
- Community Practice Sites (Pokhara and Lakenath Areas and Village

Development Committees

The summary of MBBS curriculum and hours of training in the three professional periods of study are reported as below:

<u>Period of study</u>	<u>prescribed hours of training / education</u>
<u>Basic Sciences</u>	2267*
First MBBS	
Second MBBS	
<u>Clinical Sciences</u>	4200
Third MBBS	
Final MBBS	

Students complete clinical rotations during the 5th – 9th semesters of their training.

* Additional 502 hours are allocated for self study.

Rotating Internship

Interns have available to them a variety of options in meeting the requirement of one year of compulsory rotating internship. This allows the students to meet their individual needs, and at the same time the requirements of the medical councils of their country of origin.

The Elective Program

Manipal College of Medical Sciences & Manipal Teaching Hospital, Pokhara, Nepal

Elective Program for Foreign Medical Students/Graduates.

The elective program at MCOMS and MTH is becoming very popular. We have been getting a stream of elective residents from Loma Linda State University, California, Cambridge University, UK, University of New Castle, Australia, New Zealand, University of Cape-town, South Africa etc. Most of the residents come for electives in Pediatrics and Community Medicine. Other subjects of interest are Medicine and Surgery.

Goals and Objectives:: the endeavor is to help the students gain as much experience as possible during their stay at MCOMS.

As is to be expected in developing countries, majority of the health problems in Nepal are related to the environment. These include GI disturbances, ARI, infectious diseases, vector-borne diseases, TB, and leprosy. The above conditions could be associated with severe / moderate

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malnutrition especially in children. In adults, cirrhosis of liver is a problem even amongst women since alcohol consumption is an accepted social behavior. MCH problems pertaining to poor ANC, IDD, anemias, vitamin A deficiency are also widely prevalent. Other cases seen are rheumatic fever and heart disease, worm infestations, diseases related to smoking, malignancies, collagen and skin diseases. There is also an increase in the number of HIV cases.

The Elective Proposal

Preceptor : Dr SK Dham, Dean and CEO

Department Chair : Head of the Department concerned

Student Course Director :Dr S Mallick, Consultant ENT,

Facilities: The Form M : Undergraduate students from the 3rd to the 5th years work in the hospital as part of their clinical teaching and training program after two years of the basic sciences course. Post Graduate students will be admitted in the clinical disciplines very shortly.

Library: A well equipped library is available for use by all staff and students

Other facilities include 24 hours functional Operating theatres, Emergency services, ICCU, NICU and ICUST. Scan facilities are available and Radiotherapy plant for cancer is also established

Laboratory services, blood bank, dispensary and a physical therapy department are all available in the hospital campus. E mail and Internet facilities are available in a communication center in the hostel.

Clinical and Academic Activities: Students participate in ward rounds and attend the seminars and symposia held in the college. They will be required to present cases and take active part in discussions. They will also attend health camps, which are held on a regular basis. They can be involved in the treatment of cases under supervision. Apart from working in the hospital, we could attach students to the Department of Community Medicine (Public Health) - wherein they can accompany the undergraduate students to the community / field practice areas and health posts as well assist in the rural medical camps.

Elective Course Fee: US\$ 100 / student for a period not extending 6 months

Accommodation: A student may make a request for accommodation in the Phulbari students hostels. If available, a twin sharing room furnished with a bed, writing table, chair, cupboard and bed linen will be given. Charges: US\$ 8/day. This includes the cost of meals comprising breakfast, lunch, evening tea and dinner. The hostels are a four minute walk from the hospital. Taxis are available at the hospital gate for going to the town.

Facilities Available: MCOMS has a library. E-mail and Internet facilities are available in the Communication Center in the hostel. Facilities available at Manipal Teaching Hospital include 24 hour functional Operating Theatres, Emergency Services, ICCU, NICU and ICU, CT Scan, Ultra sound, X Ray, Laboratory Services, Blood Bank, Dispensary and a Physical Therapy Department.

The Clinical Program in New York

On February 27, 2007, the Manipal College of Medical Sciences executed an affiliation agreement with Wyckoff Heights Medical Center, 374 Stockholm Street, Brooklyn, NY 11237. Students who attend Wyckoff heights Medical Center (WHMC) for clinical education must:

- ◆ complete all required education in basic medical sciences;
- ◆ pass the USMLE Step I Examination; and
- ◆ meet New York State requirements, with facilities at WHMC for clinical observation and experience in clinical field work at WHMC especially in the areas of internal medicine, surgery, obstetrics and gynecology, pediatrics and family practice.

WHMC has accredited residency programs in each of these specialties.

According to the terms of the affiliation agreement, students at WHMC are permitted to rotate through the Departments of Internal Medicine, General Surgery, Pediatrics, Obstetrics and Gynecology, Family Practice, and the respective subspecialty cores and subinternships, and that appropriate supervision will be provided by professional staff members. The protocol for the educational programs for students, collectively and individually, in each department shall be developed and implemented in accordance with the University's policies for clinical clerkships by the Medical Education Office for Administration in consultation with the University's Dean.

WHMC will also provide faculty preceptors, residents, and/or interns acceptable to the University as student instructors to provide guidance, instruction, and feedback to the students and act as intermediaries between the medical students and the staff. The University will grant supervising physicians faculty appointments in accordance with its faculty appointment policy.

Within one week following completion of clerkship rotation by each student, WHMC

agrees to submit to the University a completed copy of the University's Clerkship evaluation form filled out by the supervising physician and when appropriate countersigned by the Vice President for Medical Education.

At all times, the University shall have responsibility for the administration of the program, including the curriculum content, the requirement of matriculation, grading, graduation, and faculty appointments.

WHMC shall provide initial emergency medical care for students who are injured or become ill while on rotation. Students are expected to provide their own personal health insurance while on rotation at WHMC.

On April 31, 2007, staff from the New York Education Department met with E. Kenneth Freiberg, D.O. Vice President for Graduate Medical Education via conference call. The team concluded the Hospital is well equipped in terms of physical resources, faculty, and academic experience to provide clerkship training for students enrolled in the medical education program at Manipal College of Medical Sciences, Pokhara, Nepal

Summary

Based on its observations and findings, the team concluded the program of medical education of Manipal College of Medical Sciences, Pokhara, Nepal is functioning effectively in preparing students to engage in clinical clerkships in New York State, and an excellent clinical training program has been established at Peninsula Hospital Center. There were many strengths in the program noted by the team. These include but are not limited to:

- The MCOMS program is affiliated with Kathmandu University, and has been approved by the Medical Councils of India (MCI), Sri Lanka, Mauritius and Bangladesh. The MCI sets standards of medical education in India;
- The program provides adequate instructions in basic and clinical sciences during 4 ½ years of course work. One year of rotating internship provides ample opportunities for evaluating and managing various clinical problems in both outpatient and inpatient situations. The availability of several internship scheme options in the MCOMS program allows students to meet their individual needs, and at the same time the requirements of the medical councils of their country of origin. The USMLE pass rate of 100 % is quite impressive (as seen in the Data base document).
- Students are required to demonstrate participation in various teaching activities by maintaining an attendance rate of 75 % in both lecture and practical/ laboratory classes. Students who fail to meet this requirement are not approved to take the MBBS university examinations;

- Many members of the basic science faculty are physicians (medical doctors) who have postgraduate qualifications (Diplomate or equivalent status) in their chosen basic science specialty;
- The College has several standing committees one of which is the Curricular Integration Committee. This committee ensures integration of inter-departmental curricula;
- Incorporating problem based learning (PBL) in various basic and clinical teaching activities in small groups is encouraging;
- The program introduces students to clinical topics during the earlier months of basic science training period. The faculty reported clinical exposure by way of student hospital and community visits during 1st -2nd semesters. However, based on student comments, there is room for improvement; and
- Students were very complimentary about having easy access to the faculty and senior management. Both students and faculty appear to be motivated and have a high level of satisfaction. Students appeared very satisfied with the quality of the program.

Areas that the team considers in need of improvement are based on the following and other findings:

Weaknesses

- Insufficient integration of clinical topics into the basic science curriculum;
- The current assessments methodology used by various departments relies on essay type questions and practical assessments. Some students and faculty felt such a methodology does not lend itself to a broader and adequate coverage of the curriculum in the assessments/ tests. Incorporating the MCQ (USMLE type) approach might in some way help overcome this deficiency; and
- There is no evidence to suggest that students provide any feedback/ input into the faculty deliberation concerning the curriculum and its delivery. It is not clear which of the standing committees is responsible for the overall monitoring of the student curriculum. Is it the Curriculum Integration Committee? Does the Students Affairs Committee participate in any discussions related to the curriculum?

Based on the findings of the team the following recommendations are made.

Recommendations

- Basis science departments should work with clinical science faculty in developing a plan aimed at incorporating some aspects of clinical sciences into the basic science curriculum. Such a plan should be presented to the Dean and curriculum committee for their consideration and implementation;
- Incorporating MCQ or similar type of approach in the current departmental method/s of assessments will not only broaden the coverage of various topics in the assessments but also improve the overall quality of education;
- Student evaluations (example – pre-structured questionnaires) concerning various aspects of curriculum, topics taught and teaching methods will be useful in providing feedback to the faculty committee/s overseeing curricular matters.

Additionally, the school should consider inviting student representatives to attend the meetings in which curricular matters are discussed. Students' views in the deliberations of such committee meetings could be very helpful in further improving the education experience of the students;

- The College should consider including its student teaching material (examples: power point presentations, syllabus/notes and publications) on the College Website. Accordingly, a plan for this should be developed and presented to the Dean and management for their consideration;
- Greater clinical exposure to patient during the first two years of the program and greater hands-on experience during clinical clerkships. Create opportunities for students to follow patients over time;

- Expand the budget for new equipment purchases;
- Establishing an office in the USA that will provide liaison to the hospital affiliates, coordinate admissions for U.S. applicants, track U.S. students in clinical rotations in New York, and give the college a presence locally for the support of U.S. students in New York;
- Work toward increasing faculty and student input into the curriculum with the aim of
 - a) Promoting the integration of basic science with clinical medicine topics;
 - b) Including the concept of competencies into the curriculum;
 - c) Rearranging subject priorities in the curriculum to make it more pertinent to current needs
 - d) Reducing the proportion of time taken up by lectures and more active forms of teaching
- Bolster faculty strength so that all the major “systems” can be represented by clinical as well as basic science experts. Particular note is made of the absence of neurologists and neurosurgeons for neuroscience and clinicians for oncology;
- Develop a cardiac catheter laboratory facility and staff to enhance and broaden education in cardiovascular disease;
- Include MRI coursework to introduce modern imaging technology;
- Continue to monitor and ensure the presence of an adequate number and variety of cases to ensure that the students can gain adequate clinical experience;
- Develop at least one model “team approach” for multidisciplinary cases (e.g., oncology, cardiovascular disease, or neurology) so that students can appreciate the advantages of working as a team member and not just as an individual practitioner;

- Use the planned move of the basic science faculty and other faculty to the hospital as an opportunity to integrate the basic science and clinical science educational programs;
- Continue to develop and refine the work already begun on the “systems” approach in the curriculum;
- Assist the depart of pathology to obtain more slides and specimens;
- Further develop the PBL coursework by having small group PBL classes; and
- Enhance the communications with Kathmandu University and other regulatory agencies and support the modernization the curriculum.

The team recommends that Kasturba Medical College furnish the Department with a report due June 1, 2008 on any developments in the medical education program in the college concerning the recruitment of U.S. students, the enrollment, faculty, facilities, curriculum, student services, or clinical education. The report should focus on the areas of concern noted above and the program of clinical education in New York State. A site visit may be considered at the time of submission of the report should conditions warrant as determined by the Department.