



Introduction

The history of hospital service in Nepal starts in the year 1889 with the establishment of Bir Hospital, the oldest hospital now providing general care to tertiary care to the people of Nepal. Bir hospital is the first teaching hospital for compounders, dresser and later nurses. For the same reason the first medical school called Civil Medical School was established in 1933 AD in Bir Hospital. It was also the centre for the training of FRCS, MRCP and MRCOG since 1987. Therefore Bir Hospital has been a postgraduate Training centre from the beginning. In 1979 super-specialization medical services was expanded in this hospital.

Modern medical education had started in Nepal along with the birth of Bir Hospital in 1889 AD. Although MBBS program was introduced in 1978 in Institute of Medicine, it did not have its own teaching hospital in beginning, so the clinical teaching and learning activities were centered in Bir and other hospitals in the valley. With the support of Tribhuvan University post graduate education was started in Bir hospital and other hospitals in the valley through Post Graduate Medical Education Coordination Committee from 1994 AD.

Building up on these experiences and based on the national need, Bir Hospital was developed into the National Academy of Medical Sciences (NAMS) on its glorious 114 years in 2002. This was another landmark achievement in the fields of medical education and health services which has provided great optimism and opportunities for the doctors working under the Ministry of Health to teach and to be taught.

NAMS, along with 13 affiliated hospitals is rapidly progressing in its activities since last 12 years. During this span of time, the institution has matured and 33 subjects of post-graduation courses in MD/MS/MDS/MCh/DM and two levels of nursing education have been developed. The annual intake has increased from 46 to 93 in postgraduate courses.

The NAMS is now running the postgraduate programs of the Basic Specialist Training of MD/MS/MDS and the Higher Specialist Training program of DM/MCh in different subjects.

Aims

The National Academy of Medical Sciences (NAMS) has been established by the Government of Nepal to develop initially with the three major aims:

1. To produce trained manpower with the help of higher education in the field of medical sciences ,
2. To make available high quality health service in Nepal and
3. To develop the academy as the national source center to conduct research studies in the field of medical sciences.
4. To expand the specialty health services and research in different part of the country.

Achievements of the Aims

- 1. To produce trained manpower with the help of high medical education**

Production of trained manpower with

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the help of high education in the field of medical sciences in the country is being achieved by the establishment of postgraduate programs of the Basic Specialist Training of MD/MS/MDS and the Higher Specialist Training program of DM/MCh in different subjects.

The program like MD (Radiation Oncology) is being run only in the country. In this way, the NAMS is not only producing the required trained manpower for the Government service, medical colleges and private sectors but also providing the young medical graduates the opportunity for higher and the highest medical education. Such opportunities of trainings are otherwise difficult in the country or abroad.

- 2. To make available high quality health service in Nepal**

The NAMS is running the postgraduate Basic Specialist Training of Higher Specialist Training of DM MCh in more than dozen affiliated hospitals and institutes in different parts of the country. The consultants working there are trained and included in the academic and research activities. The postgraduate trainees are residential working in those hospitals and institutes. The NAMS in these



ways is helping to achieve the high quality health service in the affiliated institutes.

NAMS is giving extra marks to the government doctors working in the remote places of the country for the admission in MD/MS/MDS. This has encouraged the young doctors to join the government service and to work in the remote places of the country. All candidates have of course to achieve the minimum required fifty percent marks to pass the entrance examination.

3. To develop the academy as the national source center to conduct research studies in the field of medical sciences

The NAMS has established Institutional Review Board (IRB) for Research to promote, coordinate and monitor research activities in the NAMS with its different affiliated institutes all over the country. A thesis with research work is compulsory in MD/MS training program in all the subjects. For the appointment and promotion of faculty members, publications are required. As the programs of the NAMS are running in more than a dozen of hospitals and health institutes, it is promoting the research culture among health

professionals and institutes all over the country. To promote and disseminate the quality research work, the NAMS publish the Postgraduate Medical Journal of NAMS (PMJN).

4. To expand the specialty health services and research in different part of the country

BPKCH Bharatpur & RAEH Bhairahawa is two different affiliated hospitals outside Kathmandu providing subspecialties health services. Residents of Medicine, ophthalmology, Radiation Oncology and clinical oncology are posted for their clinical attachment and academic research. NAMS has its future plans to extend similar activities in different hospital in different part of Nepal to deliver quality health services and to produce medical experts and to encourage them to work outside the major cities.

Structure

Assembly: The Assembly chaired by the Hon. Health Minister, Nepal Government .Assembly has total 31 members along with Vice-Chancellors of two universities, Chairman, Nepal Medical Association, Hon. Member of Planning Commission, Health Secretary, Finance Secretary, Chairman University Grant Commission, Chairman Nepal Medical Council, Chiefs of the Affiliated Hospitals and other experts,

Academic Council: Academic Council is formed by inclusion of professors. There are representative experts from the Ministry of Education, Ministry of Health Population, Tribhuvan



University, & Kathmandu University. Rector chairs the Academic Council meeting.

Executive Council: Vice Chancellor is the chief executive followed by Rector, Dean, and Registrar respectively apart from other technical and non-technical officers and staffs.

Assistant Dean: Examination section is taken care by Assistant Dean along with management of curriculum and other academic activities.



Subject Committee : There is a subject committee to plan and manage each postgraduate training program. The subject committee consists of faculty members from different sub-specialties, units and institutions. It has a coordinator for day to day management. It is formed in each Post Graduate Training Program. It will be chaired by the Coordinator of the Subject Committee and the teachers of the categories of Professor and Associate Professor working in the respective subjects (e.g. General Surgery, Internal Medicine) will be the member of subject committee.

Institutional Review Board (IRB): Institutional Review Board (IRB) in the Academy promotes, co-ordinates and monitors the research efforts of all the faculty and postgraduate candidates of the institution as well as considers ethical issues involved in any research activity and protection of the interests of the human subjects. The Member Secretary of Nepal Health Research Council (NHRC) is an ex-officio member.

Medical Education Unit: Medical Education Unit in the Academy provides the necessary-technical expertise in the activities like curriculum development, training, assessment, evaluation and planning to the subject experts of different postgraduate programs, organization of teacher, research methodology etc.

Library: The NAMS has Central Library in Bir Hospital and there is library in each of the affiliated institutes and hospitals. The NAMS is helping to develop, including networking of, the different libraries Books and journals, paper and electronic, are shared with different libraries. The ultimate aim of the NAMS is to develop the libraries as digital information center and better establish central medical library - information centre.

Postgraduate Medical Journal of NAMS (PMJNAMS): To promote and disseminate the quality research work, the NAMS publish the PMJN. It is currently publishing the PMJN twice a year. The PMJN publish the original study, review articles, case reports and other educational sections.

MD/MS/MDS Program

The NAMS is running MD/MS/ MDS program in different subjects. The names of the subjects and the training institutes are given below.

S.N.	PROGRAM	HOSPITALS FOR CLINICAL ATTACHMENTS
1	MD (Internal Medicine)	Bir Hospital, Patan Hospital and Shree Birendra Hospital along with BPKMCH, SGNHC and Mental Hospital for rotation in internal medicine and oncology, cardiology and psychiatry medicine respectively.
2	MS (General Surgery)	Bir Hospital, Patan Hospital and Shree Birendra Hospital for surgery along with Kanti Children's Hospital for pediatric surgery, rotation.
3	MD (Pediatric)	Kanti Children's Hospital and Patan hospital along with Maternity Hospital for neonatal care posting.
4	MD (Anesthesiology)	Bir Hospital along with Kanti Children's Hospital, Maternity Hospital and SGNHC for pediatric, maternity and cardiology anesthesia postings respectively.
5	MD (Obstetrics & Gynaecology)	Maternity Hospital along with Patan Hospital and BPKMCH for rotational postings.
6	MS (Orthopedics and Trauma Surgery)	Bir Hospital, Shree Birendra Hospital and Patan Hospital.
7	MD Radiodiagnosis	Bir Hospital , Shree Birendra Hospital, Kanti Children's Hospital, Maternity Hospital and BHKMCH for pediatric, OBG and oncology radiology postings respectively
8	MD (Radiation Oncology)	Bir Hospital and BPKMCH.
9	MD (Ophthalmology)	Nepal Eye Hospital and Tilganga Eye Centre, Kathmandu and Lumbini Eye institute, Bhairawa
10	MD (Pathology)	National Public Health Lab and Bir Hospital and Shree Birendra Hospital and BPKMCH, Bharatpur.
11	MD (General Practice).	Patan Hospital and Bir Hospital
12	MD (Dermatology)	Bir Hospital, Shree Birendra Hospital and Patan Hospital
13	MD (Psychiatry)	Mental Hospital, Bir Hospital and Sri Birendera Hospital.
14	MDS (ENT)	Bir Hospital.
15	MDS (Prosthodontic)	Bir Hospital
16	MDS Periodontology & Oral Implantology	Bir Hospital

Outline of the MD/MS/MDS Program

The MD/MS/MDS training program consists of a three years postgraduate residential degree course in different major subjects. It is a Basic Specialist Training Programs. The goal of MD/MS program is to prepare clinically competent, compassionate and academically sound human resource in the specialty general concerned.

Entrance criteria and examination

Entry criteria for MD/MS/MDS program are as follows.

- Candidates should have MBBS or equivalent degree recognized by the Nepal Medical Council.
- Candidates should have minimum two years of work experience in Government, University or other similar recognized hospitals after temporary registration with Medical Council.
- Candidates should achieve minimum 50% marks in the written MCQ type entrance examination.
- Selection of candidates is based on the basis of merit list.
- Candidates have to indicate their subjects of choice in the entrance form.

Entry criteria for DM/MCh program are as follows.

The candidate must possess a MBBS and postgraduate MD/MS degree in specified subject and 2 years of working experience. He/she must have obtained at least 50% marks in entrance examinations. The sponsored candidate must have no objection letter from their concerned ministry/institution.

Subjects and Hospital for clinical placement

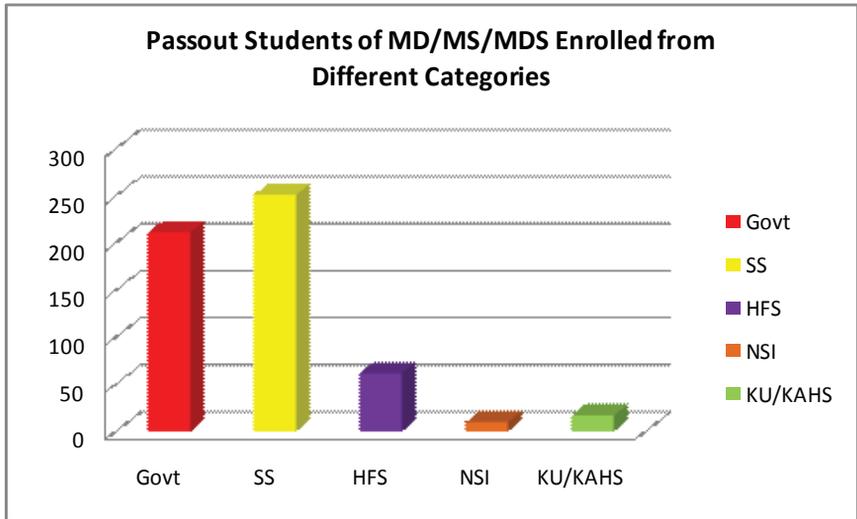
S.N.	SUBJECTS	INSTITUTIONS
1.	MCh (Neuro-Surgery)	Bir Hospital
2.	MCh (Gastro-Surgery)	Bir Hospital , Shree Birendra Hospital
3.	MCh (Uro-surgery)	Bir Hospital , Shree Birendra Hospital
4.	MCh (Burn and Plastic Surgery)	Bir Hospital, Kathmandu Model Hospital
5.	MCh (CTVS)	Bir Hospital, Sahid Gangalal Heart Center
6.	DM (Hepatology)	Bir Hospital, BPKCH
7.	DM (Diabetes and Endocrine)	Bir hospital
8.	DM (Gastroenterology)	Bir hospital
9.	DM (Nephrology)	Bir hospital
10.	DM (Cardiology)	Bir Hospital, Sahid Gangalal Heart Center
11.	DM (Neurology)	Bir Hospital
12.	DM (Medical Oncology)	Bir Hospital, BPKCH
13.	DM (Critical care ,Sleep Medicine & Pulmonology) Hospital	Bir Hospital, Shree Birendra Hospital

DM/MCh

To provide the super specialty health services within the country NAMS has started training on different subjects. It has opened the door to expand the services as well as to start the modern technologies to give the standard health services within the country.

Pass out -14. Currently 29 students are studying in different academic years.

MD/MS/MDS



Abbreviation:

Govt: Government, **SS:** Subsidized Fee Scheme, **HFS:** High Fee Scheme/Full Payment Fee Scheme, **NSI:** Nick Simon Institute, **KU:** Kathmandu University, **KAHS:** Karnali Academy of Health Sciences.



Product of NAMS

SN	MD/MS/ MDS Program	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL
1	MOH	22	21	21	21	11	3	41	14	3		157
2	SS	11	26	15	24	35	48	23	29	1	39	251
3	HFS							11	23	1	27	62
4	Army	3	2	6	5	3	1	3	4		3	30
5	NSI						3		2	2	3	10
6	Patan		1		1	2		1	1		2	8
7	Police		1	4				1	1	1		8
8	AP		2		2			2	1		2	9
9	BPKMCH	1			1			1	1			4
10	SGNHC										1	1
11	Bir								1		1	2
12	KAHS											0
13	KU							1				1
14	SAARC	6	8	3	2	4	6	9	7	1	8	54
15	NJS		2	1		2						5
16	TGEC				1							1
17	NEH				1	1						2
18	Foreign			1								1
Total		43	63	51	58	58	61	93	84	9	86	606

Abbreviation:

MOH: Ministry of Health, **SS:** Subsidized Fees, **HFS:** High Fee Scheme/Full Payment Fee Scheme, **Army:** Shree Birendra Hospital, **NSI:** Nick Simon Institute, **Patan:** Patan Hospital, **Police:** Police Hospital, **AP:** Armed Police Hospital, **BPKMCH:** B.P. Koirala Memorial Cancer Hospital, **SGNHC:** Sahid Ganganal National Heart Centre, **Bir:** Bir Hospital, **KAHS:** Karnali Academy of Health Sciences, **KU:** Kathmandu University, **SAARC:** South Asia Association for Regional Co-operation, **NJS:** Netra Jyoti Sangh, **TGEC:** Til Ganga Eye Centre, **NEH:** Nepal Eye Hospital, **Foreign:** Other Foreign



MD/MS/MDS Category wise admission

SN	MD/MS/ MDS Program	2001	02	03	04	05	06	07	08	09	10	11	12	13	14	TOTAL
1	MOH	16	22	25	24	13		3	6	37	15	0	46	25		232
2	SS	9	25	19	27	32	4	49	2	21	31	42	3	17	39	320
3	HFS									12	24	29	6	10	32	113
4	Army	3	3	5	5	3		3		2	4	3	4	3	1	39
5	NSI			1			2	4		1	2	3	3	3	3	22
6	Patan			2	1	2				1	2	2	4	3		17
7	Police		2	2	2					1	2	0	2	3	1	15
8	AP		2	1	2					2	1	2	1			11
9	BPKMCH		1							1	1	0	0	0		3
10	SGNHC											1		1		2
11	Bir										2	1	1	3		7
12	KAHS												7	2	1	9
13	KU									1						1
14	SAARC	9	7	3	3	5	2	10	1	6	9	12	6	7	6	86
15	NJS		2										2			4
16	TGEC				1											1
17	NEH				1	1										2
18	Foreign			1												1
Total		37	64	59	66	56	8	69	9	85	93	95	85	77	83	886

Abbreviation:

MOH: Ministry of Health, **SS:** Subsidized Fees, **HFS:** High Fee Scheme/Full Payment Fee Scheme, **Army:** Shree Birendra Hospital, **NSI:** Nick Simon Institute, **Patan:** Patan Hospital, **Police:** Police Hospital, **AP:** Armed Police Hospital, **BPKMCH:** B.P. Koirala Memorial Cancer Hospital, **SGNHC:** Sahid Gangalal National Heart Centre, **Bir:** Bir Hospital, **KAHS:** Karnali Academy of Health Sciences, **KU:** Kathmandu University, **SAARC:** South Asia Association for Regional Co-operation, **NJS:** Netra Jyoti Sangh, **TGEC:** Til Ganga Eye Centre, **NEH:** Nepal Eye Hospital, **Foreign:** Other Foreign



Nursing Education

- Proficiency certificate level Nursing (PCL Nursing)-3 Years course after SLC or equivalent.
- Post (BN):- 3 years course. The candidate must have specified work experience and must pass entrance examination by securing 50%.



PBBN

Pass out-171. Currently 60 students are studying in different academic years and 30 are waiting for result.

PCL

Pass out -276. Currently 120 students are studying in different academic years

Program

The Training program

The training period leading to MD/MS/MDS are of 3 years duration. The postgraduate (PG) students undergo through 3 years full time residential training. The students learn by working in the hospital with hands on training and participation in

different teaching learning activities. Clinical training is done by rotation in the hospitals attached to National Academy of Medical Sciences where they will be residential and will be given graded responsibility in patient management. The students have proper rotation plan, for example:

- Initial Posting (First year): Major specialty for basic training with first on 24 hours on duty at least twice a week
- Rotation Posting (Second year): Rotation in most of the required sub-specialties with first on 24 hours duty at least twice a week
- Final Posting (Third year): Decision making training in the major specialty With second on duty at least twice a week

Subject Committee

The training program is managed and supervised by the subject committee of the concerned MD/MS/MDS Subjects. Stress is given on the practice of evidence based medicine.





Learning Strategies

Learning strategies covers different aspects of training, via:

- a. Theory, including applied basic science classes,
- b. Clinical approach and examination-of patients,
- c. Skills/procedures, by hands on training, dummy manikin training,

d. Mandatory Basic Courses:-

- Research Methodology: One week training program for all MD/MS/MDS Residents
- Medical Education: Four days training program for all MD/MS/MDS Residents
- Advance cardiac life support: Three days training program for all MD/MS/MDS Residents

- Basic Surgical Skill for Surgical Specialties: Three days training program for MS general surgery MD General Practice, MD Obstetrics & Gynaecology, MS Orthopedics and Trauma Surgery, MDS Periodontology and Oral Implantology, MDS Prostodontics, MS ENT Residents
- Advanced Trauma Life Support: Three days training program for MD Anesthesiology, MD GP, MS General Surgery, MD Obstetrics & Gynaecology, MS Orthopedics and Trauma Surgery Residents
- Palliative Care: Two days training program for MD Internal Medicine, MD General Practice, MD Medical Oncology Residents





e. MD/MS/DM/MCh resident should perform the allocated minimum number of important procedure during their training period. This experience will automatically ensure many other necessary background experiences to be a competent & confident expert in future.

The MD/MS/MDS residents actively participate in: Case presentation, Seminar (correlation seminar/integrated approach), Journal clubs, Topic presentation, Grand round/clinical meetings, Clinicopathological conferences, Mortality meetings, Clinico Radiological Meeting, Bedside clinical teaching, Lectures, inter-faculty and inter-hospital topic discussion.

Activities of Training

Teaching learning activities:



Logbook maintenance:

Logbook is strictly maintained throughout the training program. The logbook is assessed during the formative assessment as well as during the viva of the each annual and final exit assessment. The contribution of posting and annual assessments in the final exit examination and the assessment of logbook in the viva help to train and assess the attitude and skill component of the training component.

Thesis

Thesis is compulsory for every student. A guide is designated for each PG student for thesis work. Thesis subject is chosen and approved by the subject committee and IRB by 9 month in the first year. Thesis should be completed and submitted by the end of 30 months. Thesis has to be approved, and then only the students become eligible to appear in the final exit examination.

Assessment:

Assessment consists of three components:

- Posting assessment
- Annual assessment
- Final exit assessment

Posting assessment:

The formative assessment is done at each rotation by the unit chief. The chief of the unit constantly monitors the performance, including logbook, of the candidate. Considering the overall assessment of the candidate, the unit chief submits the assessment form to the examination section dean office. This sort of internal



assessment by involving all concerned consultants helps to maintain quality of both work and supervision of PG students. It immediately gives feeling of empowerment to unit chief and other faculty.

The unit chiefs feel responsibility to monitor students' performance and to guide them. Moreover students are also aware that the chief of each unit, wherever they work, has some say in their assessment. This automatically cautions them to be disciplined and receptive. Being aware of such assessment by consultants, students are also motivated to achieve the requirements mentioned in the card. The program would, thus, help to achieve the aim of formative assessment, which is the identification of deficiency during the training



period in order to correct them Necessary guidelines in educational methods are given to unit chiefs.

Annual Assessment:

At the end of each year, there is annual assessment consisting of theory and clinical practical examination components. In the clinical practical component of the assessment, there are clinical cases, OSCE and viva. Viva includes assessment of logbook and other topics

The total marks in the posting and annual assessments contribute to 15% of marks in the theory and 15% of clinical practical components of the final exit examination as shown below.

Declaration of Results

Final results for all courses will be displayed on the Notice Board of Examination Section of NAMS, Kathmandu and will also be available on internet at www.nams.org.np. Result of individual candidate will not be informed on telephone.

Affiliated hospital's bed capacity

S.No.	Hospital's Name	Hospital Beds
1	Bir Hospital, Mahaboudha	426
2	Shree Birendra Hospital, Chhauni	413
3	Patan Hospital, Lagankhel	380
4	Kanti Children Hospital, Maharajgunj	250
5	Sahid Gagalal National Heart Center, Bansbari	200
6	Nepal Eye Hospital, Tripureshwor	100
7	B.P. Koirala Memorial Cancer Hospital, Bharatpur	100
8	Paropakar Maternity and Women's Hospital, Thapathali	384
9	Tilganga Eye Center, Gaushala	
10	Mental Hospital, Lagankhel	50
11	Shree Rana Ambika Eye Hospital, Bhairahawa	215
12	National Public Health Laboratory, Teku	
13	Phect Nepal (Model Hospital) Plastic Surgery, Pradarshani Marg	40



Achievements

Large number postgraduates of NAMS are serving the nation in different part of the country from Mechi to Mahakali, from High Mountain to Terai. Not only under the Ministry of health, remarkable number of specialist doctors are working under Home ministry, Defence Ministry, Different medical colleges, Community hospital and private hospitals. in total 119 Specialist doctors trained in this academy are giving the medical services in different hospitals under ministry of health and population.

Postgraduate Doctors trained in NAMS giving the government services different part of Nepal

SN	Zone	Number
1.	Mechi	3
2.	Koshi	8
3.	Sagarmatha	1
4.	Janakpur	5
5.	Bagmati	56
6.	Narayani	16
7.	Gandaki	13
8.	Dhaulagiri	1
9.	Lumbini	8
10.	Karnali	2
11.	Rapti	4
12.	Bheri	8
13.	Seti	4
14.	Mahakali	2

Future plan

There are 13 affiliated hospitals inside and outside Kathmandu. Considering the increased need as well as public demands for specialties and sub-specialties medical services, NAMS is running different academic courses in different subjects. The scholars trained from this academy are competent, confident and patient centered to meet the expectation of the country to provide evidence based high quality health care services.

There is a big gap in health facilities between rural and main cities. To minimize this gap NAMS has a future vision to accommodate the many government hospitals in academic activities. If we get support for this we can transform the health facilities to reach to poor people remained beyond the health facilities. To reach this goal the new organogram of NAMS is conceptualize as mentioned in this brochure and we hope our dream will come true.

Conceptual NAMS (Future Plan)

