

THE MBBS CURRICULUM

STEERING COMMITTEE FOR THE ESTABLISHMENT OF THE MEDICAL SCHOOL
THE MALDIVES NATIONAL UNIVERSITY
2015

FOREWORD

In 2014, a Feasibility Study was undertaken to establish a Medical School in Maldives under the aegis of the Maldives National University (MNU). Following the recommendations of the Feasibility Study Report, a Steering Committee comprising Maldivian medical doctors and other service-minded officials was formed.

Thirty five members of the medical community registered their names to participate in the Steering Committee. The Committee's first task was to decide on the course aims, objectives, and graduate competencies. Additionally, the Steering Committee agreed on the type of curriculum (whether system-based, problem-based or discipline-based) to be taught in the proposed program. I was elected as the Chairman of the Committee, and Dr Ahmed Ziyen was elected the Vice-Chairman. The following medical doctors and key stakeholders registered for the Steering Committee and have participated in at least one meeting.

Dr Abbasa Abdul Hamid, IGMH	Dr Ali Shahid Mohamed, Senehiya	Dr Mohamed Siyan, The Clinic
Dr Abdul Azeez Ahmed, IGMH	Dr Ali Shareef, MNU	Dr Mohamed Waheed, IGMH
Dr Abdul Hannan Waheed, MQA	Dr Aminath Nusra, ADK	Dr Moosa Hussain, IGMH
Dr Abdulla Adsar, IGHM	Dr Arif Mohamed, IGMH	Dr Nazma Hameed, ADK
Dr Abdulla Junaid, Vision Opticals	Dr Fathimath Nadhiya, MMA	Dr Neeza Haleem, IGMH
Dr Abdulla Niyaf, ADK	Dr Hassan Hameed, MNU	Dr Yoosuf Shan, IGMH
Dr Ahmed Faisal, IGMH	Dr Hussain Shakeel, IGMH	Mr Ahmed Afaal, ADK
Dr Ahmed Nishan, IGMH	Dr Ibrahim Shiham, IGMH	Mr Azleen Ahmed, MOE
Dr Ahmed Ziyen, IGMH	Dr Mohamed Habeeb, MOH	Mr Hussain Haleem, MNU
Dr Ali Abdul Latheef, IGMH	Dr Mohamed Ismail, IGMH	Mr Saeed Ahmed, VIHS
Dr Ali Nazeem, IGMH	Dr Mohamed Shaneez Najmy, IGMH	Ms Aishath Shaheen Ismail, MNU
Dr Ali Shafeeq, IGMH	Dr Mohamed Shareef, MNU	Ms Aishath Thasleema Usman, MOH

The initial draft work and discussions were devolved to a subcommittee. This subcommittee decided on 8th June 2015 to adapt primary graduate outcomes of Australian Medical Council for the Maldives because these are more comprehensive and subsumes the competencies of MMC then in existence. The subcommittee comprised the following: Dr Ali Latheef, Dr Ali Shahid Mohamed, Dr Arif Mohamed, Dr Fathimath Nadhiya, Mr Ahmed Afaal, Mr Azleen Ahmed, Dr Ali Shareef, Dr Hassan Hameed.

I thank the Steering Committee members for their delightful enthusiasm and participation in coming together for the well-being of our community in this important task.

ALI LATHEEF, MBBS, MD.
CHAIRMAN

16TH JUNE 2015

INTRODUCTION

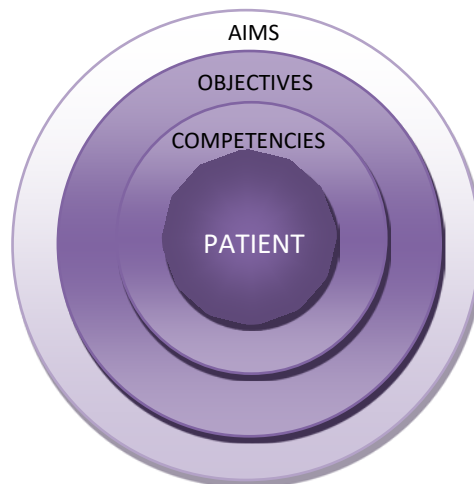
HISTORICAL BACKGROUND

The Maldives Medical (MMC) is the national regulatory authority with the mandate to assess and accredit basic medical education courses in the Maldives. According to MMC, the purpose of medical training is to produce high quality medical practitioners who are willing and able to meet the existing and emerging challenges of the national health care system. MMC sets the basic standards for accreditation of medical training courses leading to MBBS qualification that permits the holder to seek general registration as a high quality medical practitioner.

In 2008, the incoming government floated the idea of establishing a foreign owned medical university in the Maldives as a public-private-partnership venture. An Indian party was successful in bidding for the university/college and there was an immediate need to establish standards for a medical school. MMC, including some public minded medical doctors, were concerned about the quality of graduates from a hastily established medical university. In 2009, with the support of WHO, a consultancy was floated to write accreditation standards of the medical university. The MMC-formulated accreditation standards for the MBBS degree program for institutions admitting 50 students were almost the same as the document under the same name available from the Nepal Medical Council (<http://www.nmc.org.np/downloads/816d6.pdf>). Two additional graduate competencies had been appended to the Nepali graduate competencies to contextualize the document.

AIMS OF THE COURSE

The aims and objective of MBBS course are more general than competencies. In a sense, the organizing framework of the MBBS course may be represented as given in the diagram below. The organizing framework is essentially patient-centred with increasing levels of details of the course as one approaches from the periphery to the centre of the framework.



The Aims, Objectives and Graduate Competencies of our MBBS Course have been developed by integration of the MMC Accreditation Standards and the relevant “Standards for Assessment and Accreditation of Primary Medical Programs by the Australian Medical Council 2012”. Some of the other referenced documents include MBBS Curricula of Newcastle University, UK and The University of Queensland, Australia.

OPTION 1

The MBBS course aims to produce caring, knowledgeable, competent, professional and skilful medical graduates who broadly understand health and disease of the individual, the family and society, have effective communication skills, independence and critical judgment and ethical and social understanding. The graduates should be eligible for postgraduate studies, adapt to future developments in practice, and work independently within multi-professional health care teams.

OPTION 2

The aim of the MBBS course is to foster the development of a caring, knowledgeable, competent, professional and skilful medical graduate who broadly understands health and disease of the individual, the family and society, and who is able to benefit from postgraduate medical education, adapt to future developments in practice, and work independently within the multi-professional health care team.

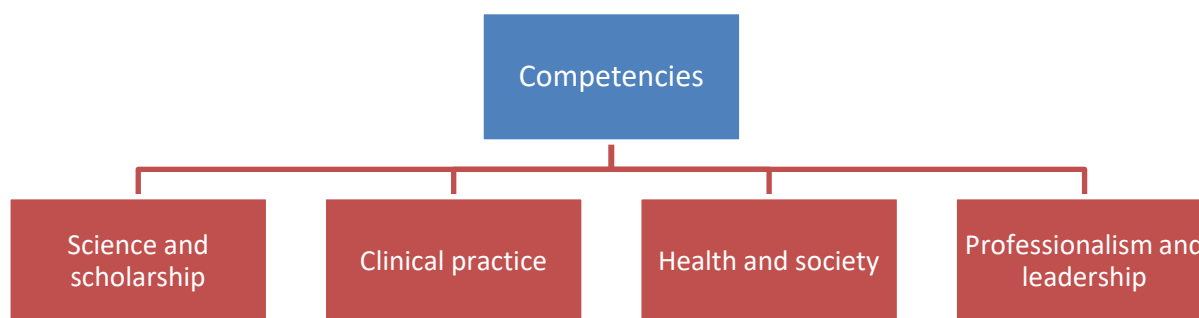
OBJECTIVES

The MBBS Program will graduate doctors who:

1. Understand the basic and clinical sciences and be able to apply them to deliver safe and quality medicine.
2. Have the knowledge, skills and attitudes needed to identify and manage common and serious illness.
3. Apply key principles learned to maintain the health of both individuals and communities.
4. Incorporate research and evaluation into clinical practice and the delivery of health services.
5. Direct their own learning and evaluate their own performance before and after graduation.
6. Maintain an understanding of information technology, sources of evidence and its application to practice, and clinical audit.
7. Apply the highest ethical and professional standards in their practice of medicine.
8. Have a strong foundation of relevant and necessary knowledge, skills, and attitudes, which will enable them to undergo postgraduate training in any one of the many fields of medicine.
9. Meet all of the key learning outcomes and professional standards specified for professional registration in the relevant medical councils.

GRADUATE COMPETENCIES

The competencies of the **MBBS graduate** are organized in terms of four domains. These domains are an organizing framework for the competencies the students must demonstrate at graduation. The competencies are, by their very nature, interlinked across domains and within each domain. More specific competencies and learning objectives are in each component of the MBBS course. The competencies provide a guideline for teachers to deliver the MBBS course.



The key competencies required of MBBS graduates are grouped into four domains. The four domains are:

1. Science and Scholarship: *the medical graduate as scientist and scholar*
2. Clinical Practice: *the medical graduate as practitioner*
3. Health and Society: *the medical graduate as a health advocate*
4. Professionalism and Leadership: *the medical graduate as a professional and leader*

These domains collectively provide the MMC requirements that students must demonstrate at graduation. The key competencies or outcomes contained in each domain are necessarily interlinked when students enter clinical practice. These specific outcomes will be what the health service employer expects the graduate to deliver.

Domain 1-Science and Scholarship: the medical graduate as scientist and scholar

On entry to professional practice, the MBBS graduates are able to:

- 1.1 Demonstrate an understanding of established and evolving biological, clinical, epidemiological, social, and behavioural sciences.
- 1.2 Apply core medical and scientific knowledge to individual patients, populations and health systems.
- 1.3 Describe the aetiology, pathology, clinical features, natural history and prognosis of common and important presentations at all stages of life.
- 1.4 Access, critically appraise, interpret and apply evidence from the medical and scientific literature.
- 1.5 Apply knowledge of common scientific methods to formulate relevant research questions and select applicable study designs.
- 1.6 Demonstrate a commitment to excellence, evidence based practice and the generation of new scientific knowledge.

Domain 2-Clinical Practice: the medical graduate as practitioner

On entry to professional practice, the MBBS graduates are able to:

- 2.1 Demonstrate by listening, sharing and responding, the ability to communicate clearly, sensitively and effectively with patients, their family/carers, doctors and other health professionals.
- 2.2 Elicit an accurate, organised and problem-focussed medical history, including family, socio-cultural occupational and lifestyle features, from the patient, and other sources.

- 2.3 Perform a full and accurate physical examination, including a mental state examination, or a problem-focused examination as indicated.
- 2.4 Integrate and interpret findings from the history and examination, to arrive at an initial assessment including a relevant differential diagnosis. Discriminate between possible differential diagnoses, justify the decisions taken and describe the processes for evaluating these.
- 2.5 Select and justify common investigations, with regard to the pathological basis of disease, utility, safety and cost effectiveness, and interpret their results.
- 2.6 Select and perform safely a range of common procedural skills.
- 2.7 Make clinical judgements and decisions based on the available evidence. Identify and justify relevant management options alone or in conjunction with colleagues, according to level of training and experience.
- 2.8 Elicit patients' questions and their views, concerns and preferences, promote rapport, and ensure patients' full understanding of their problem(s). Involve patients in decision- making and planning their treatment, including communicating risk and benefits of management options.
- 2.9 Provide information to patients, and family/carers where relevant, to enable them to make a fully informed choice among various diagnostic, therapeutic and management options.
- 2.10 Integrate prevention, early detection, health maintenance and chronic condition management where relevant into clinical practice.
- 2.11 Prescribe medications safely, effectively and economically using objective evidence. Safely administer other therapeutic agents including fluid, electrolytes, blood products and selected inhalational agents.
- 2.12 Recognise and assess deteriorating and critically unwell patients who require immediate care. Perform common emergency and life support procedures and treatment, including caring for the unconscious patient and performing CPR.
- 2.13 Describe the principles of care for patients at the end of their lives, avoiding unnecessary investigations or treatment, and ensuring physical comfort including pain relief, psychosocial support and other components of palliative care.
- 2.14 Place the needs and safety of patients at the centre of the care process. Demonstrate safety skills including infection control, graded assertiveness, adverse event reporting and effective clinical handover.
- 2.15 Retrieve, interpret and record information effectively in clinical data systems (both paper and electronic).

Domain 3-Health and Society: the medical graduate as a health advocate

On entry to professional practice, the MBBS graduates are able to:

- 3.1 Accept responsibility to protect and advance the health and wellbeing of individuals, communities and populations.
- 3.2 Explain factors that contribute to the health, illness, disease and success of treatment of populations, including issues relating to health inequities and inequalities, cultural, spiritual and community values, and socio-economic and physical environment factors.
- 3.3 Communicate effectively in wider roles including health advocacy, teaching, assessing and appraising.

- 3.4 Understand and describe the factors that contribute to the health and wellbeing of different communities wherever they happen to work. Demonstrate effective and culturally competent communication and care for different communities.
- 3.5 Explain and evaluate common population health screening and prevention approaches, including the use of technology for surveillance and monitoring of the health status of populations. Explain environmental and lifestyle health risks and advocate for healthy lifestyle choices.
- 3.6 Describe a systems approach to improving the quality and safety of health care.
- 3.7 Understand and describe the roles and relationships between health agencies and services, and explain the principles of efficient and equitable allocation of finite resources, to meet individual, community and national health needs.
- 3.8 Describe the attributes of the national health care systems and national health programs including those that pertain to the health care of different communities.
- 3.9 Demonstrate an understanding of global health issues and determinants of health and disease including their relevance to health care delivery in Maldives and the broader South Asian region.

Domain 4-Professionalism and Leadership: the medical graduate as a professional and leader

On entry to professional practice, the MBBS graduates are able to:

- 4.1 Provide care to all patients according to relevant medical council's professional codes of conduct.
- 4.2 Demonstrate professional values including commitment to high quality clinical standards, compassion, empathy and respect for all patients. Demonstrate the qualities of integrity, honesty, leadership and partnership to patients, the profession and society.
- 4.3 Describe the principles and practice of professionalism and leadership in health care including demonstrated ability to undertake "the role of the doctor as a manager".
- 4.4 Explain the main principles of ethical practice and apply these to learning scenarios in clinical practice. Communicate effectively about ethical issues with patients, family and other health care professionals.
- 4.5 Demonstrate awareness of factors that affect doctors' health and wellbeing, including fatigue, stress management and infection control, to mitigate health risks of professional practice. Recognise their own health needs, when to consult and follow advice of a health professional and identify risks posed to patients by their own health.
- 4.6 Identify the boundaries that define professional and therapeutic relationships and demonstrate respect for these in clinical practice.
- 4.7 Demonstrate awareness of and explain the options available when personal values or beliefs may influence patient care, including the obligation to refer to another practitioner.
- 4.8 Describe and respect the roles and expertise of other health care professionals, and demonstrate ability to learn and work effectively as a member of an inter-professional team or other professional group.
- 4.9 Self-evaluate their own professional practice; demonstrate lifelong learning behaviours and fundamental skills in educating colleagues. Recognise the limits of their own expertise and involve other professionals as needed to contribute to patient care.
- 4.10 Be familiar with health related legislations, describe and apply the fundamental legal responsibilities of health professionals especially those relating to ability to complete relevant certificates and documents, informed consent, duty of care to patients and colleagues, privacy, confidentiality, mandatory reporting and notification.

CURRICULUM TYPE

One of the tasks of the Subcommittee was to finalize on type of MBBS curriculum. The Medical School Feasibility Report identified Discipline Based Curriculum as the most viable option for Maldives to start medical education. However, the report highlighted the merits and demerits of other types of curricula. A brief outline of each type of curricula is described below.

Discipline (Subject) based curriculum: This is a conventional curriculum being practiced widely in the region modified by the inclusion of new concepts. This model provides a general understanding on a variety of subjects relevant to medical practice. The presence of teachers across disciplines is not required at a given time. The subjects are generally classified as pre-clinical, Para-clinical and clinical. The teaching of a subject could be oriented to allow horizontal or vertical integration, problem based teaching/learning (or problem solving). The delivery of the course may be done in an integrated manner by concurrent teaching by 2-3 subject based teachers.

System based curriculum: System based integration enables students to appreciate associations between subjects (e.g. anatomy, physiology and biochemistry) and relevance of basic sciences in clinical practice. Curricula components could be integrated both horizontally (concurrent) and vertically (sequential). This requires the teachers themselves to be able to integrate subject matter across disciplines or sometimes the presence of teachers representing different disciplines at a single teaching/learning session. Therefore this method is labour intensive.

Problem based curriculum: Problem based curriculum is structured around carefully identified scenarios. The scenarios require a multidisciplinary approach. The teacher assumes the role of a facilitator and helps students to learn. This model, too, requires heavy staff commitment and intense coordination

SPICES¹: The emerging model of innovative teaching and learning incorporated into medical training to encompass an integrated approach to delivery of medical curriculum has been identified as a good approach to be considered.

The Subcommittee discussed the merits and demerits of the three approaches of MBBS curriculum. System-based and problem-based curricula had several advantages. The same were considered disadvantages of discipline-based curriculum. System-based and problem-based curricula have the advantage of making the medical school to hospital transition smoother. A problem-based curriculum, unless taught well, may result in worse graduate outcomes than a discipline based curriculum.

Members noted that the boundaries between the three types are not clear cut, and a specific note be included in the curriculum document asking teachers to relate discipline content to systems and problems, i.e., to integrate the discipline horizontally and vertically. Members agreed that resource limitations in terms of experienced doctors, etc., make discipline based curriculum the best choice in the local context for now.

Committee Resolution

The Committee considered the relative merits and de-merits of system-based, problem-based and discipline-based MBBS curricula. Considering the local context and feasibility of implementing the curriculum, it was decided that initially a discipline based curriculum with both horizontal and vertical integration in the delivery stage will be adopted for the MBBS course.

¹ (S = student centered, P = problem based, I = integrated, C = community based, E = elective driven, S = systematic).