STANDARDS FOR ACCREDITATION OF SPECIALTY MEDICAL EDUCATION PROGRAMMES

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MALDIVIES MEDICAL AND DENTAL COUNCIL

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INTRODUCTION

Accreditation standards in specialist medical education are standards used to assess whether an education programme and the education provider, provide trainees who complete the programme with the knowledge, skills and professional attributes necessary to independently practice the specialty of medicine in the Maldives.

Maldives Medical and Dental Council (MMDC) is the accreditation authority for the medical profession in Maldives under the Health Care Professionals Act 13/2015 and uses accreditation standards for assessing medical education programmes and their providers for accreditation purposes. In addition, MMDC also uses the accreditation standards for monitoring accredited programmes and medical education providers to ensure that they continue to meet the standards.

Accreditation of a medical education programme is the process of validation whereby medical education providers and universities are evaluated in relation to the implementation to the agreed accreditation standards of the medical education programme. All medical specialists must graduate from an accredited specialty medical education programme to be licensed to practice the specialty in the Maldives.

These accreditation standards describe the minimum requirements for a specialty medical education programme that needs to be to be implemented and achieved by the medical education providers. The medical education providers are encouraged to go beyond these minimum requirements and expand to produce specialist medical graduates who are professionally competent to practice safely and effectively and who have a strong foundation for evidence-based medicine and lifelong learning in medicine.

For the purpose of this document, specialty medical education programme is defined as the curriculum, the content/syllabus, and assessment and training that leads to independent practice in a medical specialty or sub-specialty practice recognized by the MMDC, that leads to a formal award certifying completion of the programme[1].

These standards aim to maintain the quality of the specialty medical education programmes conducted by the medical education providers in Maldives to a level deemed to be the norm globally and lay the foundations for accreditation of the specialty medical education programmes in Maldives. The MMDC will be responsible for reviewing the validity of these standards at least every 3 years at a minimum.

SPECIALIST GRADUATE OUTCOME STATEMENTS

The specialist graduate outcomes are the desired abilities of graduates in a specialty medical discipline at the time of exit from the programme. These outcomes provide direction for the development of curriculum

[1] Standards for Assessment and Accreditation of Specialist Medical Programmes and Professional Development Programmes by the Australian Medical Council 2015

content, teaching and learning approaches and assessment of the programme. They also guide in resource and financial allocations.

MMDC's framework of graduate outcomes for specialty medical programmes are organized in five areas as described below, that collectively provide the requirements that medical trainees must demonstrate at graduation. These areas are as a reference for medical education providers and it is not needed that all education providers necessarily organize their curriculum themes in this way but the education providers will need to demonstrate that their programme enables their graduates to meet these minimum learning outcomes.

MMDC expects from the medical education providers to have written graduate outcome statements that are relevant to the aims and objectives of the specialty medical programme. Specialist graduate outcomes statements should be interpreted according to the level of training for independent practice in the particular specialty. Specialist graduate outcomes statements shall be specific and consistent with the discipline specific knowledge, communication, leadership, scholarship and professional attributes of specialist in the particular medical discipline that are accepted across the discipline and commitment to lifelong learning and for building and developing their expertise in medicine.

The specialist medical graduate outcome statements shall include:

1. Specialist medical knowledge: Independently practice and apply discipline specific knowledge and clinical skills to make decisions and perform diagnostic, preventive, therapeutic and rehabilitation interventions, taking into consideration patient safety, within the limits of their expertise[2].

2. Communication skills: Record and maintain accurate medical notes and communicate with health care team, patients and their families respectfully and clearly and be open to clarify their questions.

3. Scholarly skills: Committed to lifelong learning, critically analyze scientific literature, conduct research, publish and disseminate knowledge, teach residents and general medical graduates and apply best evidence to the practice.

4. Professionalism: Committed to the professional code of conduct and ethical practice, accountable to the patients, profession and community, complies with laws, regulations and the societal norms, and adhere to a high standard of social values to build trust and respect for the profession.

5. Leadership and societal engagement: Take initiatives, make sound judgment for personal development and wellbeing, engage with the health system partners to improve access to and quality of services, engage with communities to educate and improve health outcomes of the society.

ACCREDITATION STANDARDS

All institutions offering specialty medical education programmes in the Maldives, shall be accredited after meeting these minimum standards for accreditation set out by MMDC which addresses ten core areas of the specialty medical education programmes as described below. The medical education providers on their part are required to adhere to these standards and ensure that their training programmes and institutions are accredited and report to MMDC on their progress in meeting the standards.

1. **Programme objectives and learning outcomes**
2. **Educational Programme and Principles**
3. **Assessment of Educational Outcomes**

[2] CANMEDs framework. Royal College of Physicians and Surgeons of Canada.

4. **Trainees**
5. **Academic Staff /Faculty**
6. **The learning Environment (Facilities and Resources)**
7. **Teaching, Learning and Research**
8. **Leadership, Administration and Governance**
9. **Monitoring and Evaluation**
10. **Continuous Review and renewal**

STANDARD 1: PROGRAMME OBJECTIVES AND LEARNING OUTCOMES

The general objectives of a specialty medicine education programmes in Medicine is to produce graduates with the knowledge and skills fundamental to the independent practice of the medical specialty or sub-specialty, who are instilled with values and attributes of professional conduct consistent with a compassionate profession and habits of lifelong learning.

1.1 The medical education provider must clearly state its goals and objectives, which includes learning, teaching, research and community responsibilities and these objectives should be made in consultation with stakeholders.

1.2 The objectives should in addition to the specialty knowledge and skills, and its teaching, services and research activities should relate to the health care needs of the population relevant to the specialty.

1.3 The learning outcomes of the specialty medical education programme must incorporate the specialist graduate outcomes outlined by MMDC to ensure specialist graduates are competent to practice independently, safely and engage with patients and community effectively in the health care delivery system in the country and have an appropriate foundation for lifelong learning, teaching and scientific inquiry in the specialty of medicine.

1.4 The specialty medical education programme should achieve the learning outcomes through comparable educational experiences and equivalent methods of assessment across all instructional sites for a given specialty.

1.5 The specialist graduate learning outcomes must be made in consultation with at least one fraternity of the particular specialty (the professional body, society or association of specialists, external education provider of the specialty). Relevant, validate- proof of endorsement from stakeholder.

1.6 The specialty education provider should review the specialist graduate learning outcomes and update based on the programme evaluation every three years.

STANDARD 2: EDUCATIONAL PROGRAMME AND PRINCIPLES

2.1 Name and level of the programme

The name of the specialty medical education programme must be appropriate, acceptable and reflective of the objectives of the course, e.g., Master of Surgery (MS), or Master of Medicine (MD) etc.

2.2 Status of the programme of study (internal, twinning, external or franchise)

The mode and framework of the course of study should be stated clearly.

2.2.1 When the specialty medical education programme is conducted in a mode other than internal to the school, the external/affiliated site must be consistent in all aspects of the programme of the parent school and must comply with the requirements in the relevant sections of the accreditation standards.

2.3 Duration and structure of the programme

2.3.1 The programme must be of sufficient duration (in total and in clinical components), scheduled to ensure that the defined specialist graduate outcomes can be achieved and to enable sequential learning and mastery of the relevant basic medical and clinical sciences and assumption of independent clinical responsibility on graduation.

2.3.2 The specialist medical graduates should undergo training for the minimum period as stipulated in the MMDC guidelines for additional registration in the relevant specialty.

2.4 Curriculum

2.4.1. The medical education provider must have a curriculum that specifies the intended competencies of the specialty and competencies in the areas of research, scholarship and technology that is developed in discussion with relevant stakeholders and validated by the fraternity of that specialty in the country or international programme accepted by MMDC.

2.4.2. There should be a curriculum committee which should be the authority for planning and implementing the curriculum. This committee should function under the governance of the Dean of the medical education provider.

2.4.3. The curriculum should be trainee-centered, integrated within and between basic medical sciences, clinical subjects and medical research methods and should describe the content, extent and sequencing of courses, with specific learning outcomes or objectives for each year.

2.4.4. The curriculum should be structured using a wide range of curriculum models, such as system-based, case-based and discipline-based learning to provide balanced and varied learning opportunities for increasing independent professional responsibilities at each stage of the programme.

2.4.5. The curriculum should include the scientific foundations of medicine including production of a thesis to equip graduates for evidence-based practice and scholarly specialist medical knowledge.

2.4.6. The curriculum should contain relevant communication, clinical, diagnostic, management and procedural skills to enable graduates to assume independent responsibility for evidence-based and safe patient care.

2.4.7. The curriculum should prepare graduates to protect and advance the health and wellbeing of individuals and community and ensure that graduates are effectively prepared for their roles as medical experts in their specialty, scholars, professionals and leaders.

2.4.8. The curriculum should include both horizontal and vertical integration of curricular components that links biomedical, clinical, behavioural, social and physical sciences, hence enabling trainees to link theory with practice.

2.4.9. The behavioural, social sciences component should be designed specifically for the specialist medical trainees and must illustrate the importance of the principles being taught to the understanding of health, disease, trauma diagnostic and treatment interventions relevant to the specialty practice

2.4.10. The clinical sciences in the curriculum should ensure that the trainees acquire sufficient knowledge and clinical and professional skills to assume responsibility for independent practice after graduation. The clinical teaching must be on real patients with increasing responsibility for the care of patients independently in outpatient, emergency and inpatient settings as the trainee progresses through the course.

2.4.11. The curriculum should enable trainees to understand the laws and regulation pertaining to medical practice, national reporting requirements, health system in the Maldives,

health policies, national programmes and Initiatives related to specialty and acquire competencies needed to solve common health problems in the Maldivian community

STANDARD 3: ASSESSMENT OF LEARNING OUTCOMES

3.1 The specialty medical education provider must establish principles and methods for the evaluation of trainee achievements.

3.2 The specialty medical education provider must establish guidelines for making decisions regarding progression and graduation including the criteria for setting pass marks and number of allowed re-sits.

3.3 The assessment scheme for the education programme must match with the methods of learning, the graduate outcomes and clearly identify the learning objectives and/or competency being assessed

3.4 The learning outcomes and competencies must be assessed at appropriate points during the course, using a range of formative and summative assessments, and ensuring that only trainees who meet these outcomes would be permitted to progress on an annual and gradual basis.

3.5 There should be a systematic observation of performance, attitudes and professional behaviour throughout the specialty medical programme, as they relate to future responsibilities, including communication with patients, families, colleagues and other health professionals, teaching, scholarly activities and leadership.

3.6 Assessments must include all of the following methodologies, to be applied appropriately according to what is being assessed: -

- Written exercises (e.g., multiple choice, short answer and essay questions, academic articles, literature reviews)
- Faculty assessments (e.g., oral exams, viva voces)
- Simulated assessments (e.g., objective, structured clinical examinations and technology-based simulations)
- Peer review and self-assessments (log books, case reports)
- Observation and work-based assessment in the real clinical environment (e.g., clinical evaluation exercise, procedural skills, technology and instrument use)
- Research Thesis

3.7 The assessment methods should be conducted in a fair, valid and reliable manner.

3.8 There must be processes in place for timely identification of underperforming trainees and implementing remediation with regular feedback to trainees on their progress or weaknesses following assessments to guide their learning.

3.9 There must also be close faculty supervision of the learning experience of each trainee at the appropriate level of graded clinical responsibility. Narrative descriptions of trainee performance and of non-cognitive achievement should be included as part of evaluations in all required areas where teacher-trainee interaction permits this form of assessment

3.10 **Examination**

3.10.1 The examination regulations that include the assessment methods, procedures of assessment, eligibility for examinations, marking and grading system, criteria for remediation, advancement, graduation and disciplinary action must be stated clearly

3.10.2 The examination regulations should be made known to the trainees and faculty.

3.10.3 There must be a procedure for calibrations and standardization amongst examiners, particularly in a summative assessment.

3.10.4 Examiners must be appropriately selected and should be a registered actively practicing specialist with experience in medical education and assessment to apply assessment criteria consistently.

3.10.5 For major examinations, the medical education provider should appoint well-qualified external examiners, who are registered and practicing specialists involved in medical education of the specialty in a medical education programme recognized by MMDC. This is to ensure that the regulation and standard of examination is appropriate and these should be commented in their reports.

3.10.6 The medical education provider must use a system of appeal of assessment results. The Dean of the medical education provider should establish an oversight mechanism for appeal processes and outcomes.

3.10.7 There should be a fair and relatively formal process for the faculty or administration to follow when taking any action that adversely affects the status of the trainees. The process should include timely notice of the impending action, disclosure of the evidence on which the action would be based, and an opportunity for the trainee to respond. The Dean of the medical education provider should ensure the due process if followed.

3.11 Trainee Academic Records

3.11.1 Trainee records must be confidential and should be made available only to the members of the faculty and administration with a need to know, unless released by the trainee, or otherwise governed by laws concerning confidentiality.

3.11.2 A trainee's academic record must be available for review by the trainee and the trainee must have the right and be given the opportunity to challenge the accuracy of the record.

3.12 Teaching and assessment in geographically separate programmes

3.12.1 The methods of teaching and assessment must be equivalent across all alternative instructional sites, with a single standard for promotion and graduation.

3.12.2 The principal academic officer must be responsible for the conduct and maintenance of quality of the educational experience and assessments conducted at all instructional sites.

3.12.3 The faculty at all sites must be functionally integrated by administrative mechanisms that ensure comparable quality in the educational experiences and consistency in assessments at the geographically separated segments of the programme.

3.13 Assessment Quality

3.13.1 The assessment and examinations must be subject to rigorous and continuous quality control processes and must be clearly stated, shared with the faculty and there must be a mechanism for students to view the quality assessment reports.

3.13.2 The medical education provider should regularly review its examination regulations, policies and practices such as standard setting, psychometric data, quality of data, and attrition rates.

3.13.3 The medical education provider should ensure that the quality control covers the scope of the assessment practices, processes and standards is consistent across all its teaching sites.

STANDARD 4: TRAINEES

4.1 Selection of trainees

4.1.1 The selection of trainees for the study of Specialty Medical education programme should be the responsibility of the Dean of the medical education provider through a duly constituted committee.

4.1.2 A transparent trainee selection procedure should be undertaken. In selecting the procedure, the medical education provider should show that it had considered the issues or reliability, validity and fairness of the selection process. Externals may assist in the evaluation of applicants, but the final responsibility must not be delegated outside the selection committee of the medical education provider.

4.1.3 The criteria and procedure for trainee selection must be stated clearly, including affirmative actions in favour of disadvantaged groups.

4.1.4 The selection criteria and the procedures used must be made available to potential applicants.

4.1.5 The entry academic qualification requirement should be restricted to the knowledge and experience considered essential to provide the trainee with the academic preparation necessary for the satisfactory completion of the specialty medical curriculum. The candidates should possess a valid license to practice as a medical doctor in the Maldives issued by the MMDC.

4.1.6 The medical education provider must state clearly any other criteria that are used in the selection process such as personal qualities and emotional stability, as well as policies and practices that address gender, racial, cultural and economic diversity of its trainees.

4.2 Class size

4.2.1 The number of trainees to be admitted should be determined by the physical facilities and teaching learning resources of the school (including faculty) and patient load in the specialty at the teaching hospital or clinical setting.

4.2.2 When determining the size of the medical trainee body, the need to share resources to educate undergraduate medical trainees or other trainees within the school and teaching hospital and responsibilities for continuing medical education, patient care and research should be considered. A minimum trainee-patient ratio of 1:5 of inpatients should be maintained for the specialty medical education programme.

4.2.3 In the beginning years before full accreditation, the specialty medical trainee intake should not exceed 4 trainees per year. Subsequently, the school can apply to MMDC for an increase in the trainee intake.

4.3 Trainee Support Services

4.3.1 The medical education provider should have mechanisms to identify and support trainees who require health and academic advisory services, including trainees with disabilities, infectious diseases, mental health needs and trainees at risk of not completing the programme.

4.3.2 There must be an effective system of personal counselling for trainees which must be accessible to the needed trainee. The faculty should determine whether personal counseling is to be provided by assigning a faculty member or If needed by a mental health professional.

4.3.3 There must be a system of progress evaluation in place, that enables trainees with academic difficulties to be detected early enough for remediation. Faculty members should be assigned as academic advisors to advise and mentor such trainees.

4.3.4 There must be a system for providing preventive and therapeutic health services including appropriate immunization to trainees.

4.3.5 Policies dealing with trainees' exposure to infectious and environmental hazards should be present. The policies must include education of trainees about methods of prevention, asepsis, the procedures for care and treatment after exposure and the effects of infectious and/or environmental disease or disability on trainee education activities.

4.4 Professionalism and Fitness to Practice

4.4.1 The medical education provider should have policies and procedures including health assessment for managing trainees whose impairment raises concerns about their fitness to practice the scope of the specific specialty.

4.4.2 There should be policies and procedures in place for identifying and supporting trainees whose professional behaviour raises concerns about their fitness to practice medicine or ability to interact with patients.

4.4.3 The medical education provider should require all prospective trainees to declare all previous convictions, investigations for alleged criminal activity and any history of serious physical or mental illness that may impact on their future practice scope of the specialty.

4.5 Trainee Representation: The medical education provider should have formal processes and structures that facilitate and support trainee representation in the governance and evaluation of their programme.

4.6 Fee refund policy: There must be clear, fair and equitable policies for the refund of tuition, fees and other allowable payments in accordance with the relevant laws.

4. 7 Trainee Amenities

4.7.1 There should be provision for trainees with amenities that increase performance efficiency, such as study space, lounge areas, information communication technology (ICT) connections, at the the school and teaching hospitals.

4.7.2 The medical education provider and the teaching hospitals should have an appropriate security and safety for its trainees, personnel including safety from discrimination and gender-based violence.

4.8 Transfer trainees:

4.8.1 There should be accounting of all such enrolments by the Dean, so that the adequacy of the school's resources to accommodate additional trainees in the relevant clinical clerkships can be assured of and the credentials of such trainees should be verified before the assignment approved.

4.8.2 Transfer trainees can only be accepted in the first 18 months of the programme and must have achievements in the programme comparable to those of trainees in the programme that they join.

STANDARD 5: ACADEMIC STAFF/FACULTY

5.1 The specialty medical education programme must be supported by appropriately qualified faculty in each of the major disciplines of basic medical sciences and the medical specialty they are teaching in, with an appropriate mix of field experience, teaching and research experience.

5.2 Members of the faculty must have the capability, reserved teaching time and continued commitment to be effective teachers. Effective teaching requires knowledge of the discipline, an understanding of pedagogy, methods of measuring trainee performance consistent with the learning objectives and readiness to be subjected to internal and external evaluations.

5.3 The faculty should understand and deliver the objectives of the educational programme according to the curriculum and provide the basis for evaluating the effectiveness of the educational programme in order to achieve the defined competencies of the graduates.

5.4 There must be appropriate balance between full-time and part-time faculty with full-time equivalent (6 hours per day) faculty accounting for more than 50%.

5.5 The medical education provider should formulate and implement a faculty development policy which ensures sufficient knowledge by individual faculty members of the total curriculum and include teaching methods, professional development, scholarly activities, student support and appraisal.

5.6 All clinical faculty members for the specialty medical education programme should be registered with MMDC as a specialist in the field of the programme and be licensed to practice medicine in the Maldives.

5.7 The Staff/Trainee Ratio

5.7.1 It is generally accepted that the ratio of staff/ trainee in a department should be based on the activities undertaken within the period of training. Sharing of faculty members between medical programmes as well as with other programmes is not encouraged if their contact hours with trainee are compromised.

5.7.2 The following ratios are considered appropriate for effective teaching and are recommended:

Overall clinical faculty/ trainee ratio 1:2

Tutorials: group size not exceeding 8 trainees per group

Problem-based sessions, Clinical teaching in hospital setting: group size not exceeding 4 trainees per group.

5.8 Management of Faculty/Academic Staff

5.8.1 There must be clear policies for selection and appointment, renewal of appointment, promotion, and dismissal of members of the faculty, including the Principal Academic Officer for the specialty medical education programme. These policies and operational processes for implementing these policies shall be clearly communicated to the faculty at the time of appointment.

5.8.2 The principal academic officer for the specialty is responsible for the overall conduct and organization of the specified specialty medical education programme and implementation of the curriculum in a manner that ensure adequate and appropriate opportunity for trainees to achieve the specialist graduate outcomes intended and maintenance of the quality of the programme as determined by the curriculum committee. The principal academic officer is accountable to the Dean of the medical education provider.

5.8.3 Each appointee should receive a clear definition of the terms of appointment, responsibilities, minimum teaching hours, line of communication, privileges and

benefits. The Dean of the medical education provider must be proactive in maintaining and retaining faculty members for the purpose of ensuring the proper conduct of the programme, research and health care services.

5.8.4 Faculty members should receive regular scheduled appraisal and feedback, including feedback from trainees, on their performance.

5.8.5 Opportunities for continuous professional development should be provided to enhance faculty members' skills and leadership abilities in teaching, research and service.

5.8.6 Due consideration should be given to the commitments of faculty members who have multiple academic responsibilities in several educational programmes as well as other clinical responsibilities, so as to ensure the programme has adequate resources.

5.8.7 There should be guidelines and policies in place that deal with circumstances in which the private interests of its faculty or staff (e.g., private practice) may conflict with their official responsibilities.

5.8.8 The medical education provider should have policies that address to prevent faculty exposure to infectious and environmental hazards and shall follow accepted guidelines in determining appropriate immunizations and prophylaxis for faculty.

5.9 Eligibility criteria for faculty

5.9.1 All clinical teaching faculty should have basic medical qualification and a post graduate degree that is registered at MMDC as a specialty and hold a valid license to practice.

5.9.2 Basic medical sciences should be taught by academic staff with a postgraduate degree in the particular basic science subject. When this is not possible, other suitably qualified staffs in other areas of health sciences and physical sciences are accepted provided that the teaching objectives relevant to the desired curriculum are met satisfactorily for example, a first degree in Biomedical Sciences and a higher degree in the same at Masters or PhD level.

5.9.3 A Tutor or Instructor in the final year of specialty programme may be appointed as required to assist faculty members in practical/demonstrations. However, they should not be counted as the faculty.

5.9.4 The posts of Professor Emeritus/ Visiting Faculty may be given to teaching faculty holding posts in other Universities. The appointment criteria will be the same as that used for appointment of regular faculty. The appointment should be institution specific and time limited and if such a Visiting Faculty is no longer involved in the teaching/training programme of the institution, this title should be cancelled.

5.9.5 Visiting faculty should not be counted for the allocation of seats or enrolment of trainees. They may be appointed for the progress of the overall academic standard and betterment of the training institution.

STANDARD 6: THE LEARNING ENVIRONMENT (FACILITIES AND RESOURCES)

6.1. The medical education provider must maintain a good environment for imparting quality specialty medical education and must have the required number of departments, sections together with an adequate number of faculty and staff, both administrative and technical.

6.2. Physical Facilities

6.2.1 The medical education provider should ensure that the trainees and faculty has access to safe and well maintained physical facilities in all its teaching and learning sites. It is essential that trainees have sufficient and accessible facilities and appropriate medical resources to support the achievement of the objectives and proper conduct of the programme, including a wide range of experience with patients and communities of different social and cultural backgrounds.

6.2.2 The medical education provider must ensure that there are physical facilities at the teaching hospital including offices for faculty and administration, tutorial rooms, library and information technology services.

6.2.3 The medical education provider must ensure the teaching hospital have facilities to impart required clinical skills to the trainees. It should incorporate up-to-date teaching aids.

6.2.4 The medical education provider must ensure the teaching hospital have facilities, materials and devices to facilitate trainee research requirements of the curriculum.

6.3 Clinical Facilities

6.3.1 For clinical teaching, a specialty department should be designated at a teaching hospital for the specialty medical education programme and approval of MMDC should be obtained prior to commencement of the programme.

6.3.2 If the teaching hospital and its clinical department is an affiliate to the medical education provider, there must be a written agreement which defines clearly the responsibilities of each party in the areas of teaching, research and patient care and persons that will be accountable for these responsibilities.

6.3.3 If the affiliated teaching hospitals is geographically separated from the medical education provider, appropriate communication linkages through internet, tele-conferencing etc. must be established that allows comparable teaching experience between the sites.

6.3.4 The medical education provider must ensure that there are adequate resources at the teaching hospitals/clinical setting to provide clinical instruction through the full spectrum of preventive, diagnostic, treatment, and rehabilitative interventions. The settings for medical education must provide experiences that will develop and enhance the value of social responsibility among the trainees.

6.3.5 The medical education provider should ensure that the clinical learning environment offers trainees sufficient patient contact appropriate to achieve the specialist graduate outcomes of the programme and to prepare trainees for independent clinical practice.

6.3.6 The medical education provider should ensure that the clinical learning environment offers trainees with opportunity to conduct research for their thesis and have processes that facilitate primary and secondary data collection and ethical approvals.

6.3.7 Medical education providers are encouraged to provide trainees, experiences in special care institutions such as homes and shelter for children, the elderly, prisons, drug rehabilitation centres and home-based care as relevant to the specialty

6.4 The Teaching Hospital

6.4.1 The teaching hospital and the specialty department responsible for conduct of the specialty medical education programme should be appropriately organized for the conduct of the programme, including the provision of a scholarly environment. It must demonstrate a commitment to excellence in both medical education and patient care with appropriate organizational structure that supports medical education and patient care with adequate time of specialists and resources. An ethical, professional and educational environment, in which curricular requirements, scholarly activity and general competencies can be met, must be demonstrated.

6.4.2 Each teaching hospital (as well as any affiliated hospital) with the specialty medical education programme should have at site a programme coordinator/supervisor with the authority and responsibility for the oversight and administration of the programme in collaboration with the Dean of the medical education provider.

6.4.3 The teaching hospital must have clear and effective communication and collaboration between the Principal Academic Officer for the specialty programme and the site coordinator(s) of each learning site to ensure programme policies and procedures are followed.

6.4.4 The teaching hospital must have, written policies and procedures in place for teaching faculty and trainees, to guide their roles, responsibilities in the teaching hospital. This should include, but is not limited to, the duty hours, disciplinary regulations and grievance processes.

6.4.5 The teaching hospital should facilitate the trainees to conduct research for their thesis including access to secondary data and facilitating primary data collection and ethics approval.

6.4.6 The teaching hospital must have in place a quality improvement process to assess the hospital's performance in medical education, and plans for international accreditation as a medical education institution.

6.4.7 The teaching hospital must have in place a Continuing Professional Education Programme that is accessible to the clinical faculty and trainees.

6.4.8 The clinical faculty should have received training in medical teaching, and principles of effective education including feedback and evaluation and should be given the time and space in which to facilitate education.

6.4.9 The teaching hospital must have adequate resources in terms of patients, diagnostic and treatment capabilities and equipment to meet the requirements of trainee training and to demonstrate exemplary care.

6.4.10 The teaching hospital's specialty departments should have at least 20 inpatient beds allocated for the specialty and the annual average bed occupancy rate should be at least 80% for the past 3 years.

6.4.11 The teaching hospital should have the following functional components:

- Outpatient care
- Ambulatory care (day) special clinics and procedures
- Emergency Care
- Critical care (intensive and high dependency)
- Rehabilitation
- Medial Laboratory services
- Radiology and Imaging
- Pharmacy services (including therapeutic materials and devices)
- Sterile medical supplies

- Operating Theatres and procedure rooms
- Public health and nutrition advice
- Medical records and Information Systems
- Quality improvement and patient safety
- Medical education and research (department responsible for planning and coordination undergraduate and specialty medical education programmes, continued professional development and medical research)

6.4.12 The teaching hospital should have an average outpatient patient load of not be less than 400 per month over the year for past 3 years.

6.4.13 The teaching hospital should have appropriate trainee/bed ratio of 1:5 for the specialty. This is important to give the trainees maximum learning opportunity while protecting the patient from exhaustion.

6.4.14 The hospital should have operation theater to hospital bed ratio of not more than 1:50 with at least 3 theatre days weekly for surgical specialties. The specialty of medical education programme should perform an average of not less than 30 major procedures and 80 minor procedures per month in the year for past 3 years.

6.4.15 A fixed time-table for clinical faculty and trainees with the clinical topics allocated for daily teaching in clinical areas must be clearly written in for every department/clinical setting.

6.4.16 A well-planned rotation schedule together with learning objectives must be clearly specified for the trainees to follow and acquire while posting at clinical areas.

6.4.17 The teaching Hospital should have adequate teaching space (small group /lecture hall/conference facilities) for the anticipated numbers of trainees, and adequate space within departments for small group meetings.

6.4.18 The teaching hospital should use a range of instruments and equipment, including up to date technology, in required amount for teaching/learning and the serving patients.

6.4.19 The teaching hospital should have a plan for monitoring and assessment should be in place with an emphasis on improving quality of learning outcomes. Monitoring of trainees and faculty should be periodic and focus on knowledge, skills and attitudes. Results and outcomes of monitoring must be used to improve training.

6.4.20 The teaching hospital should have and adhere to national laws and regulation and standards and guidance of MMDC and ensure adherence to national requirements for reporting on diseases and medicolegal issues.

6.4.21 **Patient data:** The teaching hospital should show an analysis of patient data that demonstrate trainees will receive appropriate exposure and experience

- The hospital must demonstrate an adequate number, and types of patients (IP& OP) serviced by specialty for the past 3 years.
- The hospital must provide the numbers of beds in the hospital and in each department. This must be accompanied by patient bed occupancy.
- The hospital must demonstrate adequate resources and patients for the specialty department for the previous 12 months, including daily averages.
    - Admissions, both elective and emergency in the specialty.
    - Outpatient consultations, special clinic visits and emergency visits.
    - Surgical cases, including minor procedures and major surgeries.

6.5 Library and Information Services

6.5.1 The trainees should have access to a central library managed by the medical education provider that has good ventilation and lighting with sufficient space and seating for trainees to sit and study.

6.5.2 There must adequately numbers of reference books (1 book for every 4 trainees) which are available for the trainees in the central/or departmental libraries of the teaching hospital.

6.5.3 Medical education provider and the teaching hospitals must provide free e-library/e-learning and internet services accessible to the faculty and trainees. it should be ensured that a trainees and faculty have access to key databases that contain core journals to meet trainee research needs. The trainee: computer ratio should be 8:1

6.5.4 The central library should observe extended timings, be accessible to trainees and faculty and there must be access to areas for individual study and resources should be adequate to meet curriculum and research needs.

6.5.5 The central library must have personnel with relevant skills and expertise to provide library services for production of thesis and academic publication.

6.5.6 The medical education provider should have sufficient information communication technology infrastructure and support systems to achieve the learning objectives of the medical programme.

6.6 Research facilities:

6.6.1 The medical education provider should have a clear policy that fosters research with education.

6.6.2 The medical education provider should make clear the research priorities to the trainees and provide adequate facilities and support for research and dissemination of the findings.

6.6.3 The medical education provider should ensure that the teaching hospital and clinical sites should facilitate access to population and materials required for conducting the research as part of the specialty medical education programme.

STANDARD 7- TEACHING, LEARNING AND RESEARCH

7.1 The medical education provider should provide adequate contact hours and methods for learning that meets the outcomes of the specialty medical education programme and prepares them for lifelong learning.

7.2 The curriculum must include various methods of instruction (e.g., combination of didactics, practical application, team-based projects and other activities) that will enable trainees to understand healthcare in the respective specialty of medicine with in the health system. It must emphasize on the principles of health systems organization and the economic and legislative foundations of those systems.

7.3 Conventional approaches such as lectures, tutorials, practicals, demonstrations, clinical clerkship, bedside teaching, clinic attendance, projects and field work should be adequately mixed with methods that promote active trainee participation, team work, analytical thinking and self-directed learning, critical appraisal of medical literature, role play, simulations and multi-disciplinary learning

7.4 The medical education provider should implement evidence based novel teaching methodology including but not limited to:

- Self- directed learning to inculcate the habit of lifelong learning
- Problem Based Learning and Interactive sessions
- Ambulatory teaching in the outpatient, emergency and inpatient areas for better exposure and understanding of commonly encountered clinical problems
- Experiential training in scholarly activities, communication, professionalism and medical ethics
- Acquiring clinical examination and procedural skills in real-life clinical settings under supervision
- Maintaining digital log books to document the competencies acquired during practical, clinical rotations
- Promoting learning in community settings (Community Based Learning)
- Integrated teaching, learning and community exposures
- Periodic review of scientific literature in relation to relevance to common and important clinical problems
- Computer assisted teaching- learning for diagnostics and therapeutic interventions

7.5 The medical education programmes should enable trainees to have sufficient supervised involvement with patients to develop their clinical skills to the required level and with an increasing level of independent practice as they proceed through the programme.

7.6 The medical education programme should promote role modelling as a learning method, particularly in clinical practice and research and ensures that trainees work with, and learn from other health professionals, working and learning in an inter-professional team.

7.7 The medical education provider should have agreements with teaching hospital to ensure that clinical faculty have adequate time allocated for teaching within clinical service requirements.

7.8 Clinical education should be broad based through clinical teaching, attachment to teaching hospital/clinical setting and attachment at community or specialized setting, and must be equivalent to at least 120 clinical weeks of which 90-95% must be on real patients with increasing responsibility for independent care of patients as the trainee progresses through the course.

7.9 Clinical education must be structured to provide an increasing experience in logical deductions to diagnose and manage patients in the specialty and sub-specialties.

7.10 Clinical instruction should include diagnostic imaging and clinical microbiology and pathology, pharmacology, selection of materials, devices and instruments relevant the specialty practice.

7.11 The programme should promote in addition to managing hospital-based disciples, an increasing experience in diagnosing and managing patients in primary or secondary care settings and must include the important aspects of acute, chronic, preventive and rehabilitative care

7.12 Each clinical rotation must allow the trainees to undertake a thorough study of a variety of patients having the major and common types of problems represented in the specialty.

7.13 Research should be an integral part of the curriculum. The programme should provide trainees the opportunity for self-directed scientific inquiry and production of new knowledge in the specialty with supportive supervision and its defense that results in the production of a thesis.

7.14 All instructions should stress the need for trainees to be concerned with the total medical needs of their patients rather than individual organ systems or disease, and the effects on their health of social, economic and cultural experiences in the family and community.

7.15 Throughout the course there should be methods to inculcate scrupulous ethical principles and to nurture and encourage the development of appropriate attitudes and professional conduct in the caring for patients, in relating to patient's families, and to others involved in the care of patients.

7.16 The medical education provider should have a research advisory committee that can facilitate faculty and trainees on research and should document and disseminate its research outputs. The medical education providers should endeavor to have adequate funds allocated for research.

STANDARD 8: LEADERSHIP/ADMINISTRATION AND GOVERNANCE

8.1 There must be a clearly stated mission that reflects the social responsiveness of the medical education provider to society's needs for competent and compassionate doctors, quality and safe health care and research directed at improving health care for individuals and the community.

8.2 The medical education provider must have institutional autonomy to formulate and implement policies to ensure smooth execution of its educational outcomes, to develop a system that ensures the policies are implemented and to allocate and appropriately use resources to implement the curriculum.

8.3 **The governing board**

8.3.1. The governing board should be responsible for the oversight of the medical education provider and education component of the affiliated teaching hospitals and clinical settings.

8.3.2. The board must be composed of people with knowledge and experience in higher education provision, general and specialty medical education, and medical specialists and should have no conflict of interest in the operation of the medical education provider or its associated teaching hospitals or any related enterprise.

8.3.3. Terms of governing board members should be overlapping and sufficiently detailed to permit the members to gain an understanding of the medical education programmes of the medical education provider.

8.3.4. The Governing body may give the Dean appropriate operational autonomy, authority and control over the medical education provider and its attached teaching hospital, so that he/she can function as the chief executive of the institution.

8.4 There shall be clear understanding of the authority and responsibility for institution's matters along its hierarchy and have mechanisms for dissemination of all policies and procedures related to governance, services and resources.

8.5 The medical education provider should have identified clear roles and authority of Dean and Head of Departments and the Principal Academic Officer for each specialty medical education programme.

8.6 There must be integrated institutional responsibility for the overall design, management, and evaluation of the curriculum and a Curriculum Committee should be established by the medical education provider for this purpose.

8.7 Where appropriate, for effective communication and liaison for the purpose of ensuring appropriate environment for teaching, learning, training research and service, joint committees should be established between the medical education provider, faculty and hospital authorities.

8.8 The manner in which the medical education provider is organized including the responsibilities and privileges of heads of departments, principal academic officers, faculty, trainee and committees must be in accordance to relevant laws and regulations of the medical education provider.

8.9 All specialty medical education departments should contribute fully towards academics and all facets of medical education and the institution should publish a list of its faculty on the official website. The medical education provider should publish an annual report of all its activities

8.10 The full faculty/Academic teaching staff should meet at least quarterly every year to provide an opportunity for all to discuss, establish, and otherwise become acquainted with medical education provider policies and practices.

8.11 **The Dean**

8.11.1 The Dean of the medical education provider must be medically qualified by education and experience to provide leadership in medical education, in scholarly activity and research and development and in health care provision. The Dean must have a postgraduate degree after basic medical degree, and have at least 5 years of experience in medical education.

8.11.2 The Dean of the medical education provider must appoint a Principal Academic Officer for each medical specialty education programme who has the qualification and experience in the specific specialty. The Dean may take the responsibility of the Principal Academic Officer for a specific specialty medical education programme, provided that he/she is registered as a specialist in the specific specialty in the MMDC.

8.11.3 The Dean must have ready access to the university officials, the governing body and other officials as necessary to fulfill the responsibilities of the Dean's office and should have the assistance of such Associate or Deputy Deans, and staff necessary for administration of admissions, trainee affairs, academic affairs, graduate education, continuing education, hospital relationships, research and development, planning and fund raising.

8.11.4 The Dean should ensure that the principal academic officers for the specialty medical education programme allocate adequate time for the conduct of the responsibilities and facilitate opportunities for him/her and the faculty for the continuous medical education and research and development of the faculty.

8.11.5 The medical education provider must have mechanism for addressing disciplinary issues and the Dean shall be responsible for maintaining discipline in the medical education provider and shall take steps to prevent harassment of faculty and trainees.

8.11.6 The Dean should be responsible for ensuring compliance with MMDC regulations and for the supply of correct information as and when required by MMDC. A substantial change in number of trainees enrolled or in the resources and facilities including faculty and budget should be notified to MMDC. MMDC must be notified for any plans for major modification of the curriculum (more than 30%), and approval must be sought before implementation.

8.12 A strong financial commitment must be ensured for the sustainability of the medical education provider. The medical education provider must ensure that their financial resources are sufficient to achieve the objectives of the medical education programmes and to maintain high standards of medical education. Sources of financial support must be transparent and fully disclosed.

8.13 An annual academic calendar of operation for all years must be prepared by the medical education provider specifying the details of teaching and learning activities of all its education programmes. The medical education provider should also ensure that the examinations are held effectively, efficiently and confidentially and the results of the examinations are published in a timely manner and feedback given to individual trainees.

8.14 Medical education providers must use medical research and scholarship as a basis for the specialty medical educational curricula and formulate and implement a policy that fosters

the relationship between medical research and education and encourages and prepares trainees to engage in medical research and development.

STANDARD 9. MONITORING AND EVALUATION

9.1 The medical education provider must establish a mechanism to regularly monitor and review its specialty medical education programmes including curriculum content, quality of teaching and supervision, assessment, research, scholarly activities and trainee progress decisions.

9.2 Medical education providers must systematically seek faculty and trainee feedback, and analyze and use the results of this feedback for monitoring and programme development and also collaborate with other education providers in monitoring the outcomes of the specialty medical education programmes.

9.3 In outcome evaluation, the medical education provider should analyze the performance of cohorts of trainees and graduates in relation to the specialist graduate outcomes and also examine the performance in relation to trainee characteristics and feed this data back to the committees responsible for trainee selection, curriculum and trainee support.

9.4 The curriculum committee should oversee the pass rates in individual components of the course, and investigate situations where these are inappropriately low. Redundancies and deficiencies identified in the curriculum should be corrected with due consideration to rapid scientific advancements in the diagnostic and therapeutic interventions in the medical specialties.

9.5 A variety of measures should be used to evaluate programme quality, such as data on trainee performance, academic progress and graduation, acceptance into subspecialty programmes, as well as recommendations of external examiners, programme advisors, teachers, the profession and trainees, and other relevant bodies that may be valid.
The results of such evaluation should be used to determine how well medical education provider is fulfilling their objectives and to assess the need for programme improvement.

9.6 In view of the increasing pace of discovery and changing practice of medicine, experimentation that will increase the efficiency and effectiveness of medical education is encouraged. Research experiments should have carefully defined goals and plans for implementation, including methods of evaluating the results. Planning for educational innovations should consider the incremental resources that will be required, including demands on facilities and operation, material, instrument and equipment, information management and computer hardware and software and ethical considerations.

9.7 There must be an integrated institutional responsibility for the design, implementation and review of the curriculum at least once in 3 years. The objectives and contents of the curriculum should be subjected to periodic evaluation. The same rigorous standards should be developed and enforced for the content of each year of the programme leading to the specialty award.

9.8 The results of outcome evaluation should be reported through the governance and administration of the medical education provider to the faculty, trainees and MMDC. The medical education provider should make the evaluation results available to stakeholders with an interest in graduate outcomes, and considers their views in continuous renewal of the specialty education medical programme.

STANDARD 10- CONTINUOUS REVIEWING AND RENEWAL

10.1 The efficient, effective and proper conduct of a specialty medical education programme will depend on the system or systems for quality management that the institution puts in place hence the management of the programme should submit itself to regular internal review.

10.2 Medical education providers should regularly review results of evaluation and trainee assessments to ensure that the gaps in delivering the specialty medical education programmes curricula are adequately addressed.

10.3 Medical education providers must allocate adequate financial, material and human resources to address the deficiencies in the specialty medical education programmes for the continuous update and renewal of the programme

10.4 Medical education providers should ensure programme evaluation is in compliance with MMDC accreditation standards at a minimum. The medical education providers are encouraged to go beyond these standards to ensure consistency with the advancement in the field.

10.5 Medical education providers should ensure that trainees, faculty and administration are involved in programme evaluation and ensure that amendments based on the findings of programme evaluation are implemented

10.6 Medical education providers should endeavor to provide a setting in which all faculty members work closely together in teaching, research and health care delivery, consistent with the objectives of social responsiveness.

10.7 Medical education provider should facilitate a programme of continuing professional development to disseminate emerging knowledge to peers and other health professionals, through scientific forums, linkages with professional associations, as well as health care services and public health institutions.

10.8 Medical education provider must ensure that the specialty medical education programme is accredited by MMDC, and its accreditation is valid at all times. specialty medical education programmes will subject to a review by MMDC by every 3 years at a minimum, and additional reviews at the discretion of MMDC.