SUBJECT BENCHMARK STATEMENT
IN
MEDICINE

Quality Assurance Council

University Grant Commission

Sri Lanka

October 2020

CONTENTS

FOREWORD

1   Introduction

1.1   About this Subject Benchmark Statement (SBS)

Subject benchmarking is an essential component of quality assurance in the university system. This SBS in Medicine provides guidelines and an academic reference point for courses leading to the award of medical degrees in Sri Lanka. It describes the essential characteristics which will enable a graduate in medicine to function effectively, initially as an intern house officer, and on satisfactory completion of internship, as a medical officer providing independent primary care, or in the state or private sector institutions (i.e. general professional practice), or as a trainee in a postgraduate programme leading to further specialisation. When revising the SBS, the training requirements that address the evolving healthcare needs of the society were taken into account. Hence, this SBS provides medical faculties, internal and external programme reviewers and external examiners with a common and explicit academic reference point. It also provides an authoritative and widely recognized statement of expectations of a medical graduate in a form readily accessible to students, employers and other stakeholders. Additionally, this document will facilitate international comparison of MBBS (Bachelor of Medicine & Bachelor of Surgery) degree with relevant other degrees.

The MBBS degree programme leads to a professional qualification that requires the graduates to be registered with the Sri Lanka Medical Council (SLMC) after internship, while fulfilling the minimum standards specified by the SLMC both during the degree programme and the internship training. The Medical Ordinance (Chapter 105) of 1988 empowers the SLMC to formulate regulations for the maintenance of minimum standards of medical education including standards relating to courses of study, examinations, staff, equipment, accommodation, training and other facilities at the universities and other institutions which grant or confer any qualification which entitles a person to obtain registration under the Ordinance. This SBS complements the SLMC's minimum standards for medical education. All degree programmes in the country should address this statement when planning, delivering and evaluating their MBBS degree programme to undergraduates.

The first version of the SBS in Medicine was published by the Quality Assurance and Accreditation Council (QAAC) in 2004. The work in connection with revision of this SBS began in December 2019 as a part of the overall quality assurance framework that supports academic standards and, in the furtherance, and dissemination of good practices in Universities in Sri Lanka. A 20-member panel of professors were selected to represent the subject disciplines. The statements of the previous SBS were re-categorised according to the SLQF learning outcomes, as far as possible. The SBS committee was divided into 12 subcommittees to revise the statements categorised under each learning outcome

identified in the Sri Lanka Qualifications Framework (2015 version). Extensive revision took place over seven meetings that included six Zoom-based meetings and one face to face meeting, to comply with the COVID 19 pandemic related health and safety guidelines. Based on the new Quality Assurance Council (QAC) format for SBS development, sections other than the learning outcomes were also extensively revised.

1.2 Summary of the changes from the previous SBS

The previous SBS was used as the basic document. It was extensively revised, to conform with the learning outcomes set out in the SLQF 2015 and to adhere to the current format prescribed for developing the SBS. Additional information has been included in relation to teaching/learning (T/L) methods and assessment methods.

1.3 Defining principles

The revised SBS is based on the principles of outcome-based education and student-centred learning. Hence, the statement collectively defines the final outcome of the degree programme, i.e. the MBBS graduate. The learning outcomes used are the SLQF learning outcomes. The statement does not attempt to assign a specific weight to each learning outcome within the overall degree programme. Instead, it is left up to the individual study programmes to find the best mix of the 12 learning outcomes that would address all the components of this statement. T/L methods and assessment methods have also been identified based on the principles of outcome-based education and student-centred learning. The individual study programmes should use the T/L and assessment methods as a guide to select the most appropriate methods that fit their programme. Additionally, the individual programmes can select any appropriate method that has not been specified in this document.

2 Degree programmes covered by this Statement

This statement is concerned with professional degree courses leading to the award of the MBBS degree. This is the undergraduate degree in Medicine awarded by all the Faculties of Medicine in Sri Lanka (some are named as Faculty of Health Sciences and Faculty of Medicine and Allied Health Sciences). Faculties of Medicine are encouraged to develop their own innovative approaches in designing and delivering their courses within the broad framework described here.

The minimum credit requirement for the MBBS degree programme should be 150 credits, to be completed during five academic years. In the credit allocation for the clinical training component, the calculation of a credit should be based on the SLQF defined industrial training standards, which is 100 notional learning hours per credit.

3 Nature and the extent of the study programme

3.1   Integration of subject areas is a key feature:
This statement covers the following broad subject areas: basic/pre-clinical sciences, applied/para-clinical sciences, clinical sciences, public health and behavioural sciences/medical humanities.   The course provides the undergraduate with intellectual skills such as analysis and reflection, problem solving and clinical reasoning, and has vocational, ethical and legal components. In keeping with global and regional trends, elements of vertical and horizontal integration across subjects should be introduced by all faculties and be supported by relevant administrative structures.

3.2   Clinical training is an essential component:
Additionally, the subject of Medicine is characterized by having a significant component of clinical skills training and appropriate attitudes. Professional standards are of great importance as is the ability to work together with other healthcare professionals. The acquisition of clinical skills involves access to patients under the supervision of clinical teachers, usually medical practitioners, in the hospital, primary care, community and home settings. While universities are responsible for the core organization and assessment of training programmes in medical education, the clinical training is arranged and provided with the active participation, guidance and cooperation of those clinical teachers that constitute the extended faculty.

3.3   Electives are encouraged:
The medical course leads to a professional degree where the core curriculum is compulsory. In addition to the core curriculum opportunities for student choice with regard to topics of diverse learning not covered by the core curriculum should be encouraged through periods of elective study.

3.4   Intercalated degrees may be offered:
The faculties may decide to introduce intercalated degrees as per global trends. However, this should not in any way compromise the duration or quality of the training leading to the MBBS degree. At least 12 months of additional study or research would be required for award of an intercalated degree.

3.5   Exit options are offered to those who do not complete the MBBS degree programme:
Options should be made available to undergraduates, who are unable or unwilling to complete the MBBS course. These will be awarded provided that they have fulfilled certain minimum academic criteria. It is desirable for all Faculties of Medicine to develop such **exit** ('fall back') options for students who are unable or unwilling to complete the MBBS course. However, such qualifications are not equivalent to the professional degree of MBBS and will not entitle them to register with the SLMC as a medical practitioner. Those qualifications should

follow the relevant SLQF level requirements.

4   **Aims and objectives of the study programme**

The broad aim of the programme is to develop a graduate with requisite knowledge, skills, attitudes and mind-set capable of successfully completing internship, practising in promotive, preventive, curative, rehabilitative and palliative sectors in primary, secondary and tertiary healthcare settings in Sri Lanka, while undertaking further learning.

5   **Subject-specific learning outcomes in core areas**

SLQF learning outcomes describe the attributes and competencies of a generic Sri Lankan graduate. The following attributes and competencies are customized for a Sri Lankan medical graduate. The committee is of the view that one of the key attributes of medical practice is compassionate care.

5.1   **Subject / theoretical knowledge**

Graduates should be able to explain the scientific basis of:
- the genetic basis of the human body, its inheritance and early development of human beings;
- the normal structure and function of the human body, the different organ systems and their inter-relationships;
- changes occurring during the life cycle;
- physiological and biochemical basis of regulation of body functions and homeostasis
- the risk factors, aetiology, pathogenesis, pathology, and natural history of diseases;
- signs and symptoms of diseases, investigations, diagnosis, differential diagnosis, pharmacological agents and non-pharmacological methods used in management of diseases;
- management of emergencies;
- pharmacological basis of therapeutics, therapeutics, adverse reactions to therapy, medication errors, curative and palliative therapy;
- disability and rehabilitation;
- uses and limitations of systems of medicine;
- psychosocial and socio-cultural interactions with illness using behavioural sciences, medical anthropology, sociology, and basic psychology;
- learning and continuing education with the use of the underlying educational principles;
- values, ethics and legal aspects in relation to practice of medicine in Sri Lanka;

- the role of the family and extended family, formal and informal social support systems, and their inter-relationships and interactions;
- interpersonal interactions using principles of communication;
- the use of demography and vital statistics in relation to medical practice;
- the use of basic, applied and clinical epidemiology in relation to medical practice;
- principles of evidence-based practice of medicine;
- scientific method, basic statistics as applied to medicine and principles of use of big data;
- patient safety and safe practices in the hospital and community settings;
- health promotion, prevention and screening for diseases;
- needs assessment and healthcare planning;
- healthcare management and health economics;
- the organisation of curative and preventive healthcare services in the country;
- healthcare provision in disaster situations;
- concepts of global health (including green concepts, climate change).

5.2 Practical knowledge and application

5.2.1 *Clinical skills*

The graduate should be able to:
- obtain relevant information from a history which is patient-centred, socio-culturally and emotionally sensitive, structured and relevant;
- perform a relevant and systematic physical and mental state examination in a sensitive manner, appropriate for age, gender, culture and clinical condition;
- formulate a diagnosis or differential diagnosis or identify a problem list based on history and examination, using a sound clinical reasoning process;
- select appropriate investigations and interpret their results;
- decide on treatment based upon clinical finding, evidence and patients' wishes;
- plan patient management in a holistic manner appropriate for primary, secondary and tertiary levels of care, recognizing the following;
  a. importance of socio-economic status and cultural background
  b. importance of discussing the management plan with the patient, or if appropriate, a relative or carer
  c. effect on the patient and household or family
  d. relevance of age
  e. requirements for informed consent
  f. need for teamwork
  g. need for appropriate referrals
  h. financial constraints
  i. impact on occupation and future abilities to work
- document and communicate appropriately including writing of a rational and safe prescription;
- perform those practical and technical procedures, including investigative and therapeutic measures, which are relevant to general professional practice in Sri Lanka, considering costs, risks and hazards to the individual and the health system

considering the emerging situations;

- provide care with competence, empathy and compassion, taking into consideration the values and duties of a doctor.

Graduates should be able to take into consideration the following contextual factors in their management plan:

- emergency situations which require immediate action and be able to carry out the initial treatment of such conditions;
- conditions which require early or immediate intervention by the healthcare team, and under appropriate supervision, undertake tasks to initiate and be involved in the care of acutely ill patients;
- health needs of patients with chronic illness and disability, initiate relevant medical investigations and interventions, and plan management;
- care for patients in ambulatory settings, home environment and hospital settings (primary, secondary and tertiary levels of care) and in urban, rural, and estate environments;
- multi-disciplinary and multi-professional teams involved in the management of patients in need of social support, rehabilitation or palliative care, including care of the dying;
- emerging situations such as pandemics and disasters.

5.2.2 *Population health, primary healthcare and health systems*
The graduate should be able to promote and protect health by:

- relating the underlying science of health and disease to screen populations and patients;
- recognising and giving advice on health promotion and disease prevention based upon the socio-economic, behavioural, environmental and other factors that impact human health and contribute to health inequalities;
- providing advice on healthy lifestyles particularly with regard to child health, adolescent health, maternal health, mental health, geriatric care and care of the differently abled.

The graduate should be able to apply the principles of project or programme management in:

- planning, implementing, monitoring and evaluating health programmes or projects;
- recognising the roles of people and agencies who undertake work in the promotion of public health;
- liaising with different sectors of the health and social care systems and managing those components relevant to the care of the patient;
- engaging and building community capacity and reducing health inequities and disparities.

The graduate should be able to:
- apply the principles of patient centred philosophy of primary care, the family and assess its impact on health and disease;
- identify common symptoms and problems in a primary care setting and explain how presentations and management differ from those seen in hospital wards compared to those seen in the primary care setting;
- manage consultations and manage a good doctor patient relationship;
- deliver primary care at urban, rural, and estate environments taking into consideration the psychological, social and cultural effects on health and illness behaviour;
- manage palliative care at a home setting.

5.3   Communication skills
Graduates should be able to:
- actively listen and respond appropriately to patients, relatives, and carers, giving adequate time;
- recognize how factors such as grief, or anxiety about illness, may influence communication by the patients, relatives and carers;
- empathically recognise and respond to the patient's individuality, ideas, concerns and expectations regarding the illness;
- recognise and respond appropriately to the ethnicity, socio-cultural and religious background of patients, families and community;
- provide adequate, clear and appropriate information, advise patients and carers, and responding to their questions, in clear, non-technical terms;
- mediate and negotiate appropriately with patients, and carers in relation to care;
- explain procedures, investigations, the therapeutic plan in a culturally appropriate manner
- handle concerns of patients and their complaints appropriately;
- respond appropriately to those with bereavement and grief;
- communicate 'bad' news;
- respond to patients and carers in end-of-life situations;
- listen and respond to other healthcare professionals and colleagues;
- liaise with other members of the health care team;
- engage in medical teaching for healthcare teams;
- interact with the general public and media, for example to increase awareness on common disorders, disease prevention and health promotion;
- interact in special situations including courts of law and groups with special needs;
- communicate ideas and arguments effectively.

It is desirable that graduates are able to:
- communicate in Sinhala, Tamil and English;
- display proficiency in the English language at a level necessary for their professional activities.

5.4   Teamwork and leadership

Graduates should be able to work effectively within a team by:

- practising in a manner that promotes effective inter-professional activity, including shared learning;.
- working within the limits of their responsibility and capability;
- making decisions in partnership with members of the healthcare team and patients;
- giving leadership, when required, in the hospital and community settings.

5.5   Creativity and problem solving

Graduates should be able to critically evaluate information and use reasoning and personal judgment to:

- identify and prioritise clinical problems;
- arrive at a diagnostic hypothesis;
- draw up a management plan;
- plan preventive and health promotive actions.

Graduates should be able to apply scientific method, while recognizing the importance of:

- formulating relevant research questions or hypotheses;
- understanding basic statistical concepts and their application in clinical practice and research;
- the use of appropriate methods in collecting, analysing and interpreting data;
- reading the medical literature, critically analyse and determine its relevance to practice within one's own working environment.

Graduates should be able to demonstrate creativity and resourcefulness in:

- professional development;
- clinical practice;
- institutional and infrastructural development;
- research.

5.6   Managerial and entrepreneurship skills

In the practice of medicine, entrepreneurship should be considered mainly for effective functioning as a medical practitioner and for institutional development, rather than for individual profit. The following benchmark statements have been written with this central concept in mind.

Graduate should be able to:

- explain the economical, socio-political and cultural aspects of health;
- describe the health system in the country and different healthcare systems globally;
- explain different types of healthcare organizations including public, private and non-governmental, their governance, operational methods and management (including human resource management);

- explain basics of healthcare planning, prioritization of services and basic concepts of health economics;
- generate, develop and communicate ideas and gain support to deliver successful healthcare outcomes;
- assess critically and apply appropriately new concepts in healthcare delivery supporting new ventures;
- manage utilization of available resources optimally and efficiently;
- be accountable and responsible for professional decisions including cost-effectiveness of healthcare;
- explain the role of 'private sector healthcare' in Sri Lanka.

5.7   Information usage and management
Graduates should be able to:
- explain the difference of data, information and knowledge
- create and retrieve information of all types, including electronic information and manage appropriately the information available in regard to clinical care and patient information;
- present information clearly in written, electronic and oral forms in a culturally appropriate manner;
- produce and maintain contemporaneous, legible, accurate and pertinent records for patients under their care;
- ensure that records are duly completed, signed and dated, as well as filed and stored appropriately in a timely manner;
- analyse, interpret, objectively evaluate and prioritise information, recognising its limitations;
- respect and protect confidentiality of information;
- explain the basic concepts of using big data and other data computing methods related to health issues;
- function in an environment where information and communication technology is playing an increasing role.
- use information and communication technology to facilitate lifelong learning and keeping up to date.

5.8   Networking and social skills
Graduates should be able to:
- identify and productively engage in activities of professional bodies;
- respect diversity, cultural sensitivity and equity in all aspects of social engagement for the betterment of patients and/or community;
- liaise with individuals, institutions and organizations in discharging his or her duties in regard to vulnerable and needy patients, their households and communities;
- liaise with individuals, institutions and organizations (situated locally or overseas) under special circumstances such as pandemics, disasters;
- use media (including social media) ethically and professionally.

5.9 Adaptability and flexibility

Graduates should be able to demonstrate:

- flexibility in working with patients and with colleagues in the healthcare team;
- adaptability when faced with changing circumstances in clinical practice and in professional development, as well as in supporting the development of their institutions;
- both flexibility and adaptability when engaging in research;
- adaptability and flexibility when working in resource poor settings;
- responsibility and flexibility to be resilient, and appropriately assertive to plan organize and manage work.

5.10 Attitudes, values and professionalism

In the practice of medicine, appropriate attitudes, values, empathy and professionalism is of crucial importance.

Graduates should be able to:

- recognise the importance of the 'doctor patient relationship' in all aspects of patient care;
- take care of patients as their first concern and adopt a humane, compassionate, empathic and holistic approach to patients and patient care;
- respect patient autonomy and involve patients, or where appropriate, guardians, relatives or careers caregivers as partners in therapeutic and management decisions;
- recognise and respect different cultures, values, views and beliefs;
- recognise the use of alternative medical practices and recognise the patients' right to opt to use these practices;
- deliver healthcare in a non-judgmental and non-discriminative manner and avoid stigmatizing any category of patient;
- engage in reflective practice, audit and performance appraisal of their own work, as well as that those of professional colleagues;
- maintain trust in themselves and their profession by being open, honest and acting with integrity;
- manage their time effectively and prioritise work effectively;
- be concerned about patient safety and take prompt action if they think patient safety is being compromised.

Graduates are expected to apply ethical and legal knowledge to their practice, particularly in:

- applying the principles of confidentiality, consent, accountability, honesty and integrity;
- dealing effectively with personal illness, complaints about their own practice or behaviour, or that of colleagues; with respect to adultery, addiction, advertisement, association, fraud, force, fee splitting, failure to attend etc
- being aware of and complying with legal and professional responsibilities, with

respect to the issue of medical certificates, notification of infectious diseases, death and dying, drug prescribing, mental health, physical and sexual abuse of children and adults and abortion;
- considering the rights of patients.

5.11 Vision for life
Graduates should be able to:
- develop long-term personal and professional goals to achieve self-esteem and self-actualization with due consideration of societal responsibilities
- formulate plans and develop new competencies, which are necessary to achieve personal and professional goals
- identify, prepare and face challenges in achieving personal and professional goals
- recognise the pressures on themselves and colleagues created by a busy professional career, be aware of important issues in self-care (e.g. stress reduction, avoidance of unhealthy practices such as alcohol misuse, substance abuse and self-medication) and maintain a work-life balance to ensure one's own wellbeing in the process of achieving personal and professional goals.

5.12 Lifelong learning
Graduates should be able to:
- exercise self-awareness and reflection in evaluating their performance and personal capability and recognizing the limits of their competence;
- manage their learning with respect to continuing professional development;
- cope with uncertainty and error in decision making by:
    a. seeking out information when needed;
    b. continuous self-audit and reflective practice;
    c. acceptance of peer review.

6 Teaching, learning and assessment process
The table below provides examples of commonly used teaching and learning methods that can be used to achieve the SLQF learning outcomes.

Categories of Learning outcomes	General student-centred teaching and learning methods recommended by SLQF	Specific Student-centred teaching and learning activities in Health Sciences
1. Subject / Theoretical Knowledge	Independent learning activities, interactive lectures, team-based learning, and other small group activities	A basic sciences lecture or a self-learning lesson interspersed with some quizzes (or other such activities) for the learner to self-assess or enhance the theoretical understanding of the learning material.
2. Practical Knowledge and	Problem-based learning, team-based learning, inquiry-based	(a) A lesson either based on a clinical scenario/s or a lesson incorporating a clinical scenario/s, where the students either

Application	learning, practical classes, laboratory sessions, role play	individually or in small groups address the issues in the said scenario/s, as if they encountered the said scenario/s in an actual clinical setting. (b) Conducting either a full or a part of a patient encounter. (c) Conducting essential clinical procedures and manoeuvres. (d) Practical sessions in the laboratory or a field session in the community. (e) Research projects. (f) Elective programmes.
3. Communication	Student presentations, role play, debates, dramas	(a) Taking and presenting a history in the actual clinical setting or as a role-play. (b) Breaking bad news. (c) Delivering health promotion talks or developing health promotion material. (d) Communicating with other healthcare professionals regarding patient management. (e) In-class student presentations/role plays. (f) Writing a referral letter
4. Teamwork and Leadership	Group projects, industrial training, small group learning; e.g. problem-based learning, games	(a) Students working together in a small group learning session such as a PBL. (b) Contributing to the management of a patient in the clinical setting; e.g. monitoring a patient. (c) A group project as an elective or a research activity.
5. Creativity and Problem Solving	Assignments, projects, small group learning activities; e.g. problem-based learning	Any or all of the following (a-e) performed either individually or within a small group learning session in a simulated (i.e. in-class) or actual clinical setting. (a) Discussing the pros and cons of different patient management plans. (b) Discussing the best option in an ethical dilemma. (c) Reasoning out the pathophysiological basis for an actual or hypothetical (e.g. paper-based) patient condition. (d) Justifying a clinical diagnosis, ordering of investigations or a treatment plan. (e) Reasoning out the pathophysiological basis for a treatment plan for an actual or

		hypothetical (e.g. paper-based) patient condition. (f) Field work, projects, assignments. (g) Research project with a report or dissertation.
6. Managerial and Entrepreneurship	Group projects, industrial training, small group learning; e.g. problem-based learning, games, simulated training, industrial (workplace-based) training	Any or all of the following performed either individually or within a small group learning session in a simulated (i.e. in-class) setting. (a) Improvising to bring about the best patient outcome in a resource-poor setting. (b) Manage limited resources to prioritize on the most-needy patients. (c) Applications on health economics, medical administration and healthcare systems.
7. Information Usage and Management	Assignments, presentations, projects, case studies	(a) Documentation, access, retrieval and storage related to medical/health records. (b) Conducting a literature search. (c) Practising best-evidence medical care (EBM). (d) Participating in epidemiological studies. (e) Learning from an e-learning module. (f) Preparing and delivering a presentation using multi-media. (g) Preparing and submitting case reports, assignments using an electronic learning system.
8. Networking and Social Skills	Student presentations, role-play, debates, dramas	Any or all of the following performed either individually or within a small group learning session. (a) Responding to or initiating a forum post in the learning management system. (b) Establishing links with experts in the field electronically or face-to-face (e.g. during conferences, symposia or workshops) to engage in professional discussions. (c) Working with patient groups or patient support groups. (d) Conducting health promotion activities in the community.
9. Adaptability and Flexibility	Group projects, industrial training, small group learning; e.g. problem-based learning, role plays,	Any or all of the following performed either individually or within a small group learning session in a simulated (i.e. in-class) setting or in real-life setting, as the case may be. (a) Customizing a management plan based on

		the patient needs.
		(b) Using multiple modalities of learning to suit a given situation; e.g. learning from patients, other healthcare professionals, web searches, etc.
		(c) Accommodating the needs of other healthcare professionals in managing a patient.
		(d) Considering multiple options and their consequences for a given problem, and changing one's own course of action accordingly.
10. Attitudes, Values and Professionalism	Group projects, industrial training, small group learning; e.g. problem-based learning, role play, portfolios	Portfolio entries, workplace learning situations, small group learning activities to show: (a) empathy and emotional intelligence in all clinical and professional activities; e.g. patient management, engaging with other health professionals, engaging with patient relatives. (b) adherence to good medical practice as outlined by professional organizations such as SLMC, GMC.
11. Vision for Life	Portfolios, reflective practice	Portfolio entries, electives or other assignments/projects showing the ability to work towards a common long-term goal related to the learner's own ambition, career-goal or preference.
12. Updating Self / Lifelong Learning	Portfolios, reflective practice	Portfolio entries or other assignments/projects that require the student to identify their own learning needs and achieve those learning needs by systematically going through the steps of an established reflective learning cycle.

Note: All the above teaching and learning activities should ideally be observed or monitored (i.e. supervised) by a teacher and feedback given to the student based on their performance.

The table below provides the commonly used assessment methods that can be used to assess each of the SLQF learning outcomes.

No.	SLQF Learning outcomes	Assessment methods
1	Subject / Theoretical Knowledge	Multiple Choice Questions, Structured Essay Questions, Modified Essay Questions, Essay Questions, Short Answer Questions, Assignments, Quizzes
2	Practical	Objective Structured Clinical Examination (OSCE), Objective

	Knowledge and Application	Structured Practical Examination (OSPE), Logbook, Workplace-based assessments with a portfolio to document the results, Long case, Short case, Oral assessment
3	Communication	Objective Structured Clinical Examination (OSCE), Short case, Workplace-based assessments with a portfolio to document the results, Observer ratings/gradings of student presentation, Observer ratings/gradings of small group learning activities
4	Teamwork and Leadership	Workplace-based assessments with a portfolio to document the results, Observer ratings/gradings of project work, Observer ratings/gradings of small group learning activities
5	Creativity and Problem Solving	Scenario-based assessment items from assessments given under SLQF learning outcomes 1 and 2 above, Observer ratings/gradings of project (including research) work/reports, Observer ratings/gradings of student presentations, Assignments (even without scenarios, if appropriately worded), Portfolio
6	Managerial and Entrepreneurship	Observer ratings/gradings of project work, Portfolio, Assignments, Scenario-based assessments given SLQF learning outcomes 1 and 2 above
7	Information Usage and Management	Portfolio, Observer ratings/gradings of project/research reports, Assignments, Observer ratings/gradings of the contribution to online forum discussions
8	Networking and Social Skills	Portfolio, Observer ratings/gradings of project/research work, Workplace-based assessments with a portfolio to document the results especially in the community
9	Adaptability and Flexibility	Portfolio, Observer ratings/gradings of project/research work, Workplace-based assessments with a portfolio to document the results especially in the community
10	Attitudes, Values and Professionalism	Portfolio, Observer ratings/gradings of project/research reports/work, Workplace-based assessments with a portfolio to document the results, Objective Structured Clinical Examination (OSCE), Short case, Observer ratings/gradings of small group learning activities/student presentations
11	Vision for Life	Portfolio, Reflective writing assignments, Observer ratings/gradings of project (including elective project) reports
12	Updating Self / Lifelong Learning	Portfolio, Reflective writing assignments, Observer ratings/ gradings of project/research reports

Notes:

1. The above methods are not an exhaustive compilation. Rather, they represent the most commonly used for each SLQF learning outcome.
2. These methods convey only the possibility of a method being used. However, it does not mean that any method by default assesses any of the said outcomes, unless purposefully designed to do so. For example, portfolio can be used to assess updating

self or lifelong learning. However, if the portfolio does not contain entries that show how the candidate has achieved lifelong learning and/or if those entries are not assessed in terms of lifelong learning, then by merely including a portfolio will not ensure that lifelong learning has been assessed by the portfolio.

3. The above methods carry distinct meanings. Only if these methods are used in line with these meanings that the corresponding learning outcome would be achieved. A glossary of the most commonly used assessment methods is included in Appendix II.

7 Performance Standards

This programme shall be delivered at the SLQF level 6. To enable delivery of the program at this SLQF level, the entry qualifications should match the high academic standards, which are maintained throughout the medical degree courses. At present the entry criteria are determined by the University Grants Commission. However, these criteria should be reviewed periodically in consultation with the medical faculties.

As per UGC recommendation, qualified teachers should be available at a teacher-student ratio of 1 to 7 to deliver the curriculum. There should be adequate facilities to expose the students to the different healthcare settings with an adequate patient range and number of patients.

8 References

The following documents were referred to when writing the above benchmark statements.

- Subject Benchmark Statement in Medicine, Committee of Vice-Chancellors and Directors (CVCD) and University Grants Commission (UGC), 2004., UGC, Sri Lanka
- Sri Lanka Qualifications Framework, 2015, University Grants Commission, Sri Lanka
- Guidelines and Specifications on Standards and Criteria for Accreditation of Medical Schools in Sri Lanka and Courses of Study provided by them, 2011. Sri Lanka Medical Council (SLMC), Sri Lanka
- University Grants Commission (UGC) Circular No. 04/2019, UGC, Sri Lanka
- Basic Medical Education World Federation for Medical Education (WFME) Global Standards for Quality Improvement, 2020, WFME.
- United Kingdom (UK) Subject Benchmark Statement: Medicine, 2002, Quality Assurance Agency for Higher Education, UK.

6 Appendices

Members of the Medicine Subject Committee
Glossary of commonly used assessment methods

APPENDIX I
Membership of the Medicine Subject Committee

Prof Jennifer Perera (Chairperson)   University of Colombo
Senior Professor of Microbiology

Prof Gominda Ponnamperuma (Convenor)   University of Colombo
Professor in Medical Education

Prof Asiri Abeygunawardena   University of Peradeniya
Senior Professor in Paediatrics

Prof Vasanthi Arasaratnam   University of Jaffna
Professor of Biochemistry

Prof Harendra de Silva   SLMC Nominee
President, Sri Lanka Medical Council

Prof Nilanthi de Silva   University of Kelaniya
Senior Professor of Parasitology

Prof Priyadarshani Galappatthy,   University of Colombo
Senior Professor of Pharmacology

Prof Sampath Gunawardena   University of Ruhuna
Professor of Physiology

Prof Saroj Jayasinghe   University of Colombo
Professor of Medicine

Prof Kumara Mendis   University of Kelaniya
Professor of Family Medicine

Prof Lakmini Mudduwa   University of Ruhuna
Senior Professor of Pathology

Prof Aloka Pathirana   University of Sri Jayewardenepura
Professor of Surgery

Prof Shamini Prathapan   University of Sri Jayewardenepura
Professor in Community Medicine

Prof Thilini Rajapakshe   University of Peradeniya
Professor in Psychiatry

Dr Sudath Samaraweera   Director General of Health Services
Deputy Director General (Acting)   Nominee
Education, Training & Research
Ministry of Health

Prof Sisira Siribaddana   University of Rajarata
Senior Professor of Medicine

Prof Muditha Vidanapathirana   University of Sri Jayewardenepura
Professor of Forensic Medicine

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APPENDIX II
Glossary of commonly used assessment methods

Assignments: These are usually take-home questions/tasks where a candidate constructs a long answer, a model or a physical object using many additional literature resources and additional activities (e.g. generating new information or applying information to an existing model/framework).

Essay Questions: These are long answer questions where one open answer may consume around 30 to 60 minutes and several pages of writing. This question type is not frequently used in present-day summative exams as the number of content areas that can be covered with these questions is limited. Also, marking of the answers can be subjective, even with a well thought out marking scheme.
Logbook: See portfolio.

Long case: Traditionally, a candidate is allowed to interact with a patient for 30 to 60 minutes to take a comprehensive history and carry out a complete physical examination. Based on the information collected by the candidate, a panel of examiners (usually two) orally questions the candidate for another 15 to 20 minutes before awarding, usually, an agreed percentage score, based on the answers that the candidate provided. The questions asked by the examiners range from symptomatology, pathophysiology, investigations to management. Different candidates usually see different patients. However, this examination has now evolved from the above described traditional format to contain many modifications. These modifications may include examiners observing the candidate during history taking and physical examination, examiners asking standardized questions from every candidate, examiners awarding marks based on a structured marking sheet, examiners awarding independent marks for each candidate.

Modified Essay Questions (MEQs): Each question has a case scenario followed by a few (typically 1 or 2) questions. Thereafter, more information on the same case scenario is provided and further few questions are asked. After again providing even further information, further questions can be asked. Different questions usually carry different marks. It may be necessary that the candidates are prevented from returning to the earlier questions, if the further information provides answers to the earlier questions.

Multiple Choice Questions (MCQs): Each MCQ has a question (i.e. a lead-in) followed by a number of options from which the candidate has to select the correct or most appropriate answer. The question may or may not be based on a clinical/practical scenario (i.e. a stem). All questions carry the same mark. Though there are many MCQ question formats, the currently recommended formats in health sciences education are the single best answer and extended matching formats. Guidelines for developing these question formats can be found at:

https://www.researchgate.net/publication/242759434_Constructing_Written_Test_Questions_For_theBasic_and_Clinical_Sciences/link/00463529cfae562759000000/download

Objective Structured Clinical Examination (OSCE): This is a clinical examination consisting of several stations (usually around 10 to 15) arranged in a circuit (or carousel). Each station requires the candidate to carry out a discrete short task (i.e. a hands-on activity) lasting around 5 to 15 minutes. All stations (barring rare exceptions) are of the same time duration and a candidate moves from one station to the other after the specified time duration, until he/she completes all the stations. An assessor observes the candidate in each station and scores the candidate ability using a checklist or a series of rating scales. Within a cohort, all candidates go through the same/similar assessment material.

Objective Structured Practical Examination (OSPE): Similar to the OSCE, but the assessment material is non-clinical in nature; e.g. laboratory equipment, laboratory readings, specimens of body parts. A variant of this is the slideshow test, where slides with various visual inputs accompanied by one or few short questions are flashed on a screen. A stationery candidate (as opposed to a moving candidate in the OSCE) documents short answer/s to each question on paper or electronically. Later, all questions are marked as in a written examination.

Oral assessment: Also known as viva voce, in this assessment, a candidate is traditionally interviewed by a panel of examiners. Based on the answers that the candidate provides for the questions during the interview an agreed percentage mark is awarded by the examiner panel. However, like the long case and short case, this examination has also undergone modifications. These modifications may include asking pre-identified structured questions, each candidate being asked similar questions and independent marking by each member of the examiner panel.

Portfolio: A portfolio could be considered as a framework that facilitates collection of assessment material as supportive evidence for the achievement of learning outcomes. The assessment material may comprise the results of other examinations (e.g. workplace-based assessment), work samples from everyday practice (e.g. narratives, feedback from patients/colleagues, photographs, videos, etc.), case reports/discussions, special achievements (e.g. publications, awards), etc. The two distinguishing features of a portfolio from a logbook is that portfolio contains verifiable evidence for the performance of a learning activity (rather than a mere signature of a supervisor, as in the case of the logbook) and always such evidence is accompanied by learner reflection. A portfolio is usually assessed using structured rating form to indicate whether the learner has achieved the specified learning outcomes by the learner.

Quizzes: These can be very short answer questions (requiring an answer of one or few words) or MCQs. Questions can be based on various visual and text material. They are usually used for formative purposes either during a teaching and learning activity (e.g. a lecture, tutorial) or posted on the learning management system as pre-tests, continuous assessment and post-tests.

Observer ratings/gradings: Either a observer (i.e. an examiner) reads/inspects the work submitted by a candidate or observes a candidate performance and awards ratings based on a structured rating form.

Reflective writing assignments: The learner narrates a selected experience and reflects on it; i.e. revisits that experience with a view to learning from it. This revisiting is usually written using a structured format to illustrate the key steps of the process of reflection, based on a prescribed model of reflection. Each reflective writing is marked on a structured rating form or marking sheet.

Short Answer Questions (SAQs): These are mini essay questions. For each question, the candidates are required to write a summary answer spanning a few paragraphs. The commonest example of this category of questions is 'Write short notes on…..' type questions.

Short case: This examination consists of a brief task such as taking a short history, carrying out a focused physical examination or both. A panel of examiners (usually two) observes and awards an agreed percentage mark. In a short case examination, a candidate tackles four to six short cases, approximately. Usually, different candidates encounter different patients. However, like the long case, this examination has undergone modifications, which may include examiners asking standardized questions from every candidate, examiners awarding marks based on a structured marking sheet, examiners awarding independent marks for each candidate.

Structured Essay Questions (SEQs): Each question has typically 3 to 6 sub-parts. These sub-parts may or may not be related to a case scenario given at the beginning of the question. Different sub-parts usually carry different amount of marks. The answers are marked using a structured marking scheme.

Workplace-based assessment (WPBA): These are short, observer-based assessments of work samples carried out during day-to-day activities in clinical, laboratory or community settings. The raters, who could be supervisors, teachers, seniors, peers, other healthcare professionals or even patients, score the candidates on structured rating forms. These ratings are usually collected within a portfolio and typically used for feedback purposes. However, there are instances that a collection of many such rating forms is considered holistically to contribute to summative judgements. Some of the popular workplace-based assessment tools are mini-Clinical Evaluation Exercise (mini-CEX), Direct Observation of Procedural Skills (DOPS), Case-based Discussions (CbD), Multi Source Feedback (MSF) and patient surveys.