

2. EDUCATIONAL PROGRAM

2.1 FRAMEWORK OF THE PROGRAM

Basic standards: The medical college **must**

2.1.1. define the overall curriculum.

2.1.2. use a curriculum and instructional/learning methods that stimulate, prepare and support students to take responsibility for their learning process.

2.1.3. ensure that the curriculum is delivered in accordance with principles of equality.

Quality development standard: The medical college **should**

2.1.4. ensure that the curriculum prepares the students for life-long learning.

Annotations:

- ❖ *Framework of the program* in this document is used synonymously with curriculum.
- ❖ *Overall curriculum* in this document refers to the specification of the educational program, including a statement of the intended educational outcomes (cf.1.3), the content/syllabus (cf. 2.2-2.6), learning experiences and processes of the program. The curriculum should set out what knowledge, skills, and attitudes the student will achieve. Also, the curriculum would include a description of the planned instructional and learning methods and assessment methods (cf. 3.1). Curriculum description would sometimes include models based on disciplines, organ systems, clinical problems/tasks or disease patterns as well as models based on modular or spiral design. The curriculum would be based on contemporary learning principles.
- ❖ *Instructional/ learning methods* would encompass lectures, small-group teaching, problem-based or case-based learning, peer assisted learning, practicals, laboratory exercises, bed-side teaching, clinical demonstrations, clinical skills laboratory training, field exercises in the community and web-based instruction.
- ❖ *Principles of equality* mean equal treatment of staff and students irrespective of gender, ethnicity, religion, socio-economic status, and taking into account physical capabilities.

2.2 SCIENTIFIC METHOD

Basic standards: The medical college **must**

2.2.1. throughout the curriculum teach

2.2.1.1.the principles of scientific method, including analytical and critical thinking.

2.2.1.2.medical research methods.

2.2.1.3.evidence-based medicine.

Quality development standard: The medical college **should**

2.2.1.2. in the curriculum include elements of original or advanced research.

Annotations:

- ❖ To *teach the principles of scientific method, medical research methods and evidence-based medicine* requires scientific competencies of teachers. This training would be a compulsory part of the curriculum and would include that medical students conduct or participate in minor research projects.
- ❖ *Evidence-based medicine* means medicine founded on documentation, trials and accepted scientific results.

- ❖ *Elements of original or advanced research* would include obligatory or elective analytic and experimental studies, thereby fostering the ability to participate in the scientific development of medicine as professionals and colleagues.

2.3 BASIC BIOMEDICAL SCIENCES

Basic standards: The medical college **must**

2.3.1. in the curriculum identify and incorporate the contributions of the basic biomedical sciences to create understanding of

- 2.3.1.1. scientific knowledge fundamental to acquiring and applying clinical science.
- 2.3.1.2. concepts and methods fundamental to acquiring and applying clinical science.

Quality development standards: The medical college **should**

2.3.2. in the curriculum adjust and modify the contributions of the biomedical sciences to the

- 2.3.2.1. scientific, technological and clinical developments.
- 2.3.2.2. current and anticipated needs of the society and the health care system.

Annotation:

- ❖ *The basic biomedical sciences* would - depending on local needs, interests and traditions include anatomy, biochemistry, biophysics, cell biology, genetics, immunology, microbiology (including bacteriology, parasitology and virology), molecular biology, pathology, pharmacology and physiology.

2.4 BEHAVIOURAL AND SOCIAL SCIENCES, MEDICAL ETHICS AND JURISPRUDENCE

Basic standards: The medical college **must**

2.4.1. in the curriculum identifies and incorporates the contributions of the:

- 2.4.1.1. behavioral sciences.
- 2.4.1.2. social sciences.
- 2.4.1.3. medical ethics.
- 2.4.1.4. medical jurisprudence.

Quality development standards: The medical college **should**

2.4.2. in the curriculum adjust and modify the contributions of the behavioral and social sciences as well as medical ethics and medical jurisprudence to

- 2.4.2.1. scientific, technological and clinical developments.
- 2.4.2.2. current and anticipated needs of the society and the health care system.
- 2.4.2.3. changing demographic and cultural contexts.

Annotations:

- ❖ *Behavioral and social sciences* would - depending on local needs, interests and traditions - include biostatistics, community medicine, epidemiology, global health, hygiene, medical anthropology, medical psychology, medical sociology, public health and social medicine.
- ❖ *Medical ethics* deals with moral issues in medical practice such as values, rights and responsibilities related to physician behavior and decision making.
- ❖ *Medical jurisprudence* deals with the laws and other regulations of the health care delivery system, of the profession and medical practice, including the regulations of

production and use of pharmaceuticals and medical technologies (devices, instruments, etc.).

- ❖ The *behavioral and social sciences, medical ethics and medical jurisprudence* would provide the knowledge, concepts, methods, skills and attitudes necessary for understanding socio-economic, demographic and cultural determinants of causes, distribution and consequences of health problems as well as knowledge about the national health care system and patients' rights. This would enable analysis of health needs of the community and society, effective communication, clinical decision making and ethical practices.

2.5 CLINICAL SCIENCES AND SKILLS

Basic standards: The medical college **must**

2.5.1 in the curriculum identify and incorporate the contributions of the clinical sciences to ensure that students

2.5.1.1. acquire sufficient knowledge and clinical and professional skills to assume appropriate responsibility after graduation.

2.5.1.2. spend a reasonable part of the program in planned contact with patients in relevant clinical settings.

2.5.1.3. experience health promotion and preventive medicine.

2.5.2. specify the amount of time spent in training in major clinical disciplines.

2.5.3. organise clinical training with appropriate attention to patient safety.

Quality development standards: The medical college **should**

2.5.4. in the curriculum adjust and modify the contributions of the clinical sciences to the

2.5.4.1. scientific, technological and clinical developments.

2.5.4.2. current and anticipated needs of the society and the health care system.

2.5.5. ensure that every student has early patient contact gradually including participation in patient care.

2.5.6. structure the different components of clinical skills training according to the stage of the study program.

Annotations:

- ❖ *The clinical sciences* would - depending on local needs, interests and traditions - include anesthetics, dermatology, diagnostic radiology, emergency medicine, general practice/family medicine, geriatrics, gynecology & obstetrics, internal medicine (with subspecialties), laboratory medicine, medical technology, neurology, neurosurgery, oncology & radiotherapy, ophthalmology, orthopedic surgery, oto-rhino-laryngology, pediatrics, palliative care, physiotherapy, rehabilitation medicine, psychiatry, surgery (with subspecialties) and venereology (sexually transmitted diseases). Clinical sciences would also include a final module preparing for pre-registration training/ internship.
- ❖ *Clinical skills* include history taking, physical examination, communication skills, procedures and investigations, emergency practices, and prescription and treatment practices.
- ❖ *Professional skills* would include patient management skills, team-work/team leadership skills and inter-professional training.
- ❖ *Appropriate clinical responsibility* would include activities related to health promotion, disease prevention and patient care.
- ❖ *A reasonable part* would mean about one third of the program.

- ❖ *Planned contact with patients* would imply consideration of purpose and frequency sufficient to put their learning into context.
- ❖ *Time spent in training* includes clinical rotations and clerkships.
- ❖ *Major clinical disciplines* would include internal medicine (with subspecialties), surgery (with subspecialties), psychiatry, general practice/family medicine, gynecology & obstetrics and pediatrics.
- ❖ *Patient safety* would require supervision of clinical activities conducted by students.
- ❖ *Early patient contact* would partly take place in primary care settings and would primarily include history taking, physical examination and communication.
- ❖ *Participation in patient care* would include responsibility under supervision for parts of investigations and/or treatment to patients, which could take place in relevant community settings.

2.6 PROGRAMME STRUCTURE, COMPOSITION AND DURATION

Basic standard: The medical college **must**

2.6.1. describe the content, extent and sequencing of courses and other curricular elements to ensure appropriate coordination between basic biomedical, behavioral and social and clinical subjects.

Quality development standards: The medical college **should** in the curriculum

2.6.2. ensure horizontal integration of associated sciences, disciplines and subjects.

2.6.3. ensure vertical integration of the clinical sciences with the basic biomedical and the behavioral and social sciences.

2.6.4. allow optional (elective) content and define the balance between the core and optional content as part of the educational program.

2.6.5. describe the interface with complementary medicine.

Annotations:

- ❖ Examples of *horizontal* (concurrent) *integration* would be integrating basic sciences such as anatomy, biochemistry and physiology or integrating disciplines of medicine and surgery such as medical and surgical gastroenterology or nephrology and urology.
- ❖ Examples of *vertical* (sequential) integration would be integrating metabolic disorders and biochemistry or cardiology and cardio-vascular physiology.
- ❖ *Core and optional (elective) content* refers to a curriculum model with a combination of compulsory elements and electives or special options.
- ❖ *Complementary medicine* would include traditional or alternative practices.

2.7 PROGRAMME MANAGEMENT

Basic standards: The medical college **must**

2.7.1. have a curriculum committee, which under the governance of the academic leadership (the dean) has the responsibility and authority for planning and implementing the curriculum to secure its intended educational outcomes.

2.7.2. in its curriculum committee ensures representation of staff and students.

Quality development standards: The medical college **should**

2.7.3. through its curriculum committee plan and implement innovations in the curriculum.

2.7.4. in its curriculum committee include representatives of other stakeholders.

Annotations:

- ❖ *The authority of the curriculum committee* would include authority over specific departmental and subject interests, and the control of the curriculum within existing rules and regulations as defined by the governance structure of the institution and governmental authorities. The curriculum committee would allocate the granted resources for planning and implementing methods of teaching and learning, assessment of students and course evaluation (cf. 8.3).
- ❖ *Other stakeholders*, cf. 1.4, annotation.

2.8 LINKAGE WITH MEDICAL PRACTICE AND THE HEALTH SECTOR

Basic standard: The medical college **must**

2.8.1 ensure operational linkage between the educational program and the subsequent stages of education or practice after graduation.

Quality development standards: The medical college **should**

2.8.2. ensure that the curriculum committee

2.8.2.1. seeks input from the environment in which graduates will be expected to work, and modifies the program accordingly.

2.8.2.2. considers program modification in response to opinions in the community and society.

Annotations:

- ❖ The *operational linkage* implies identifying health problems and defining required educational outcomes. This requires clear definition and description of the elements of the educational programs and their interrelations in the various stages of training and practice, paying attention to the local, national, regional and global context. It would include mutual feedback to and from the health sector and participation of teachers and students in activities of the health team. Operational linkage also implies constructive dialogue with potential employers of the graduates as basis for career guidance.
- ❖ *Subsequent stages of education* would include postgraduate medical education (preregistration education, vocational/professional education and specialist/subspecialist or expert education, cf. 1.1, annotation) and continuing professional development (CPD)/continuing medical education (CME).