

Standards for Basic Medical Education in China

The 2016 Revision

**Working Committee for the Accreditation of Medical Education, Ministry of
Education, P. R. China**

Contents

Preface	1
Graduate outcomes of basic medical education	3
1. Science and Scholarship: the medical graduate as a scientist and a scholar	3
2. Clinical Practice : the medical graduate as a practitioner	3
3. Health and Society: the medical graduate as a health advocate	4
4. Professionalism: the medical graduate as a professional.....	5
Standards for Basic Medical Education in China	6
1. Mission and Outcomes.....	6
1.1 Mission	6
1.2 Participation in formulation of mission	7
1.3 Institutional autonomy and academic freedom.....	7
1.4 Educational outcomes.....	8
2. Education Programme.....	10
2.1 Curriculum design and instructional methods	10
2.2 Scientific method	11
2.3 Behavioural and social sciences, medical ethics and natural sciences	11
2.4 Basic biomedical sciences	12
2.5 Public health sciences	12
2.6 Clinical sciences and skills	13
2.7 Curriculum structure, composition and duration	14
2.8 Programme management	15
2.9 Linkage with medical practice and the health sector.....	16
3. Assessment of Students.....	17
3.1 Assessment methods.....	17
3.2 Relationship between assessment and learning	17
3.3 Analysis and feedback of assessment results	18
4. Students.....	19
4.1 Admission policy and selection	19
4.2 Student intake	19
4.3 Student counseling and support.....	20
4.4 Student representation	21

5. Academic Staff/Faculty.....	22
5.1 Recruitment and selection policy	22
5.2 Staff activity and staff development	23
6. Educational Resources	25
6.1 Education budgets and allocation of resources.....	25
6.2 Physical facilities	25
6.3 Clinical training resources	26
6.4 Information technology	27
6.5 Educational expertise.....	28
6.6 Educational exchanges	28
7. Programme Evaluation.....	30
7.1 Mechanisms for programme monitoring and evaluation.....	30
7.2 Teacher and student feedback.....	31
7.3 Performance of students and graduates	31
7.4 Involvement of stakeholders.....	32
8. Scientific Research.....	33
8.1 Education and scientific research	33
8.2 Scientific research by staff	33
8.3 Scientific research of students	34
9. Governance and Administration	35
9.1 Governance.....	35
9.2 Academic leadership	35
9.3 Administrative staff and management.....	36
9.4 Interaction with health sector	37
10. Continuous Development.....	38

Preface

Medical education programs in China carry out the mission of training competent health professionals, thusly closely related to the health outcomes of all citizens. Since the Ministry of Education (MOE) and the former Ministry of Health issued *Standards for Basic Medical Education (for Trial Implementation)* in 2008, the accreditation system of basic medical education in China has been gradually developed. The Expert Committee for the Accreditation of Medical Education and the Working Committee for the Accreditation of Medical Education (WCAME) of the MOE have been established, the official *Guidelines for Accreditation of Medical Education (for Trial Implementation)* has been released, and the accreditation activities have been steadily conducted. With the wide and in-depth interaction and cooperation between the WCAME and other international accreditation bodies of medical education, the accreditation of basic medical education in China has gained substantial attention and support from the international counterparts.

According to the “Opinions on the Implementation of Comprehensive Reforms” of Medical Education by the Ministry of Education and the Ministry of Health in 2012 (*Jiao Gao [2012] No.6*), China will "establish an accreditation system of medical education with Chinese characteristics and equivalent to the international practices" by 2020. In a bid to achieve this goal, the Research Institute for the Reform and Development of Medical Education of the MOE established the research team on "strategic study on the implementation of accreditation of basic medical education in China" (hereinafter referred to as research team) in 2014. In the light of the trend of international medical education and the accreditation experience acquired over the past decade, the research team carried out a comprehensive revision of the *Standards for Basic Medical Education (for Trial Implementation)* and finalized the *2016 Revision* through thorough investigation and consultations. This revision, retaining appropriate contents in the *Standards for Basic Medical Education (for Trial Implementation)*, was mainly based on the *Basic Medical Education: WFME Global Standards for Quality Improvement (the 2012 Revision)* issued by the World Federation for Medical Education (WFME) in 2012, with reference to the *Standards for Assessment and Accreditation of Primary Medical Programs by the Australian Medical Council 2012* by the Australian Medical Council (AMC), *Tomorrow's Doctors 2009* by the General Medical Council (GMC) and *Functions and Structure of A Medical School 2013* by the Liaison Committee on Medical Education (LCME).

In contrast to the original 2008 version, the 2016 revision incorporates standards at two levels of attainment, the basic standard and quality development standard. The basic standard in principle must be met by every medical school providing basic medical education, which is expressed with a "must" statement. The quality development standard is in accordance with international consensus on the best practices in basic medical education hereby representing the trend of development, which is expressed with a "should" statement. Fulfillment of quality development standards will vary with the phases of development, available resources, educational policy and other conditions of the medical schools. The set of standards in the 2016 revision is grouped into 10 areas as the original 2008 version, but with a total of 40 instead of 44 sub-areas. There are a total of 113 basic and 80 quality development standards in the 2016 revision. To enhance the readability, the 2016 revision adopts a digital index. And the number of annotations also increases to 92, to facilitate easier comprehension and implementation of reform measures.

The 2016 revision, applicable to basic medical education in China, serves as the basis for its accreditation. As the first stage of the continuum of medical education, basic medical education is to develop a medical graduate with foundational clinical ability, life-long learning capability and desired quality of professionalism through complete medical training processes. It lays an essential foundation for further learning and practice in various health care institutions for the medical

students. The professional capability of medical graduates in clinical practices needs to be gradually formed and improved in the postgraduate medical education, the continuing professional development and the continuing medical practices.

The 2016 revision reflects the international trend, taking the consideration of the domestic needs and societal expectations of medical education systems in China, which is the basis for formulating curricular programs and standardizing educational management. Each medical school is required to determine its educational objectives, formulate its expected educational outcomes and curriculum, and establish its quality assurance system based on its own characteristics and standards in the 2016 revision.

The revision also acknowledges the differences in geographic locations and among institutions, and respects the autonomy of each medical school. Therefore, it cannot be used for the ranking of medical schools. With the prerequisite of adhering to the basic principles of medical education, the revision does not set many specific and compulsory requirements apart from essential ones, so that there is sufficient space for the development and operations of each institution.

It should be highlighted that the revision upholds the core values of socialism (prosperity, democracy, civility, harmony, freedom, equality, justice, the rule of law, patriotism, dedication, integrity and friendship) as the basic principle to guide the entire course of medical education in China.

Graduate outcomes of basic medical education

The graduates of basic medical education in China should develop the correct views of the world, life and values. They should possess core values of patriotism and collectivism, and be loyal to the people. Besides abiding by the law, they should be willing to make a lifetime dedication to the development of the health care service of the country and the physical and mental well-being of mankind.

The graduate outcomes of basic medical education in China are presented in four domains: Science and Scholarship, Clinical Practice, Health and Society, and Professionalism. More specific requirements of the expected outcomes should be formulated by each institution on the basis of its own characteristics.

Medical education is a continuum covering basic education, postgraduate education and continuing professional development. At the end of basic medical education, the graduates will possess essential foundations for medical practice and be fully prepared for their further learning and development after graduation. However, the graduates do not have rich clinical experiences upon graduation, which requires them to keep upgrading their professional competence in time with the advancing pace in medicine. This requires the graduates to be mastering the scientific approaches and acquiring the ability for lifelong learning during their study in the medical school.

1. Science and Scholarship: the medical graduate as a scientist and a scholar

At the end of basic medical education, graduates are able to:

- 1.1 Possess the fundamental knowledge of the disciplines such as natural sciences, humanities and social sciences and medicine, and apply scientific methods, which will be applicable in future study and medical practices.
- 1.2 Apply medical and scientific knowledge to individual patients, populations and the health systems.
- 1.3 Describe the etiology, pathology, natural history, clinical features, diagnosis, treatment and prognosis of common presentations at all stages of life.
- 1.4 Access, critically appraise, interpret and apply evidence from the medical and scientific literature.
- 1.5 Master the basic features of traditional Chinese medicine and its basic principle of diagnosis and treatment.
- 1.6 Apply knowledge of common scientific methods to formulate relevant research questions.

2. Clinical Practice: the medical graduate as a practitioner

At the end of basic medical education, graduates are able to:

- 2.1 Conduct effective communications with patients, their family members, colleagues and health professionals of other disciplines.
- 2.2 Take a medical history in a proper, comprehensive and systematic way.
- 2.3 Perform a full and accurate physical examination, including a mental state examination, and

write medical records as required.

2.4 Integrate and interpret findings from the medical history and examination, to arrive at an initial assessment including a relevant differential diagnosis. Discriminate between possible differential diagnoses and propose rational management principles.

2.5 Select and justify common investigations, with regard to the pathological basis of disease, utility, safety and cost effectiveness, and interpret the results.

2.6 Select and perform a range of common procedures safely.

2.7 Make clinical judgements and decisions based on available evidence. Identify and justify relevant management options under the guidance of supervising physicians.

2.8 Understand patients' questions, views, concerns and preferences, and ensure patients' full understanding of their situations and options. Involve patients in the decision-making and planning of their treatments, including communicating risks and benefits of management options.

2.9 Provide information to patients, and family carers where relevant, to enable them to make fully informed choices among various diagnostic, therapeutic and management options.

2.10 Integrate prevention, early detection, health maintenance and chronic disease management where relevant into clinical practices.

2.11 Prescribe medications safely, effectively and economically based on objective evidence.

2.12 Recognise and assess deteriorating and critically unwell patients who require immediate care. Perform common emergency and life support procedures.

2.13 Describe the principles of end-of-life care for patients, avoiding unnecessary investigations or treatment, and ensuring physical comforts by providing pain relief, psychosocial support and other elements of palliative care.

2.14 Retrieve, interpret and record information effectively in clinical data systems.

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

At the end of basic medical education, graduates are able to:

3.1 Accept responsibility to protect and advance the health and well-being of individuals, communities and populations.

3.2 Explain factors that contribute to health, illness, disease and success of treatment of populations, including issues relating to health inequities and inequalities, diversity of cultural, spiritual and community values, and socio-economic and physical environment factors.

3.3 Communicate effectively in wider roles including health advocacy.

3.4 Explain and evaluate common population health screening and prevention approaches, including the use of technology for surveillance and monitoring of the health status of populations, and provide instructions on patients' follow-up visits, medications and rehabilitative therapies, etc.

3.5 Understand the quality assurance system and safety management system of health care in hospitals, and be aware of their own competence, responsibility and limits in medical practice. Attach importance to patients' safety, and recognize relevant risk factors in time.

3.6 Understand the structures and functions of the national health care system in China, and the

roles and relationships between health agencies and services, and understand the principles of rational allocation of resources, to meet the needs of individuals, populations and national health systems.

3.7 Understand the global health issues and the determinants of health and diseases.

4. Professionalism: the medical graduate as a professional

At the end of basic medical education, graduates are able to:

4.1 Provide humanistic and quality health care services to all patients in accordance with the *Ethic Principles of Chinese Physicians*.

4.2 Demonstrate professional values in health practice, including empathy, respect for all patients and commitment to high quality clinical service standards, and personal qualities of honest, integrity, teamwork and leadership.

4.3 Explain and apply the main principles of medical ethics in clinical practices. Communicate effectively with patients and their family members, colleagues and other health care professionals regarding ethical issues in medicine.

4.4 Be aware of the factors affecting physicians' health and wellbeing, such as fatigue, stress management and infection control, to mitigate health risks of professional practice, and identify the potential risks posed to patients by their own health.

4.5 Abide by the laws and regulations regarding clinical practice as well as professional ethics.

4.6 Recognize the limits of their own expertise, and show respect for other health care professionals, to learn and work effectively as a team.

4.7 Demonstrate awareness of self-directed learning and lifelong learning. Recognize the importance of continuous self-improvement and demonstrate a commitment to excellence.

Standards for Basic Medical Education in China

1. Mission and Outcomes

1.1 Mission

Basic standards:

The medical school **must**

- state its mission and make it known to its stakeholders including the leadership, staff and students of the school and health sectors and etc. (B 1.1.1)
- in its mission outline the objectives and the educational strategy in order to produce medical graduates meeting the graduate outcomes of basic medical education. (B 1.1.2)
- on the premise of abiding by relevant laws, in the mission encompass the health needs of the community, the needs of the health care system and other aspects of social accountability. (B 1.1.3)

Quality development standards:

The medical school **should**

- ensure that the mission encompasses:
 - medical research attainment. (Q 1.1.1)
 - aspects of global health. (Q 1.1.2)

Annotations:

- *Mission* illustrates the overarching framework of a medical school and its medical education program, including its positioning, educational philosophy and expected outcomes. It should match the resources and management of the school, while taking into consideration the local and national, regional and global expectations of medicine and the needs of development. It should also reflect the history, culture, and the development vision of the school. The positioning of the school should reflect its purpose, type and level of the education it provides, the community it serves and its development goals. The educational philosophy should reflect the concepts and ideas it upholds in the training of medical students.
- *The Medical school* is the educational organization providing basic education programs in medicine. The medical school can be an independent institution or part of or affiliated to a university. Medical schools would include university affiliated hospitals and other affiliated clinical facilities. Medical school not only provides basic medical education, medical research and medical services but also provides educational programs for other stages of medical education and for other health professions.
- *Health sectors* include the health care delivery system, whether public or private, and medical research institutions.
- *Encompassing the needs of health care system* refers to interaction with the local community, especially the health and health related sectors, and adjustment of the curriculum to demonstrate attention to and knowledge about health problems of the community.

- *Social accountability* refers to the willingness and ability to respond to the needs of society, of patients and the health and health related sectors and to contribute to the national and international development of medicine by fostering competencies in health care, medical education and medical research. This would be based on the school's own principles and in respect of the autonomy of universities. In matters outside its control especially health related issues, the medical school would still demonstrate social responsiveness by explaining relationships and drawing attention to consequences.
- *Medical research* would include all the scientific research related to medicine in the biomedical, clinical, behavioral and social sciences.
- *Aspects of global health* refers to the awareness of major international health priorities and concerns, including that of health consequences of inequality and injustice due to racial differences, regional and wealth disparity, and that of cross-disciplinary, cross-sector and cross-border health management to address above challenges.

1.2 Participation in formulation of mission

Basic standards:

The medical school **must**

- ensure that its principal stakeholders on campus participate in formulating the mission. (B 1.2.1)

Quality development standards:

The medical school **should**

- ensure that the formulation of its mission is based also on input from other stakeholders. (Q 1.2.1)

Annotations:

- *Principal stakeholders on campus* would include teachers, students, leadership and administrative staff of a university/school.
- *Other stakeholders* would include representatives of education and health care authorities, employers, the community and public (e.g. users of the health care delivery system, including patient organizations), academic and administrative staff, professional organizations, medical scientific bodies and postgraduate educators.

1.3 Institutional autonomy and academic freedom

Basic standards:

The medical school **must**

- have the autonomy to formulate and implement policies for which its faculty/academic staff and administration are responsible, especially regarding

- design of the curriculum. (B 1.3.1)
- allocation and use of the resources necessary for implementation of the curriculum. (B 1.3.2)
- obtain the academic support from the disciplines such as natural sciences, humanities and social sciences. (B 1.3.3)

Quality development standards:

The medical school **should**

- ensure academic freedom for its staff and students in regards to:
 - illustrating and analyzing issues of medicine from different perspectives in teaching and learning. (Q 1.3.1)
 - employing appropriate resources necessary for teaching and learning. (Q 1.3.2)
 - exploring new research findings to illustrate specific problems. (Q 1.3.3)
- enhance the integration of humanities, social and natural sciences with the medical sciences. (Q 1.3.4)

Annotations:

- *Institutional autonomy* would include appropriate independence from government and other counterparts (regional and local authorities, private co-operations, the professions, unions and other interest groups) to be able to make decisions in key areas such as student admission, design of curriculum, assessments, staff recruitment/selection and employment conditions, research and resource allocation. Institutional autonomy should be respected on the premise of complying with laws and regulations and the developmental principles of medical education.
- *Academic freedom* would include appropriate freedom of expression, freedom of inquiry and publication for staffs and students.

1.4 Educational outcomes

Basic standards:

The medical school **must**

- define the intended educational outcomes that students should exhibit upon graduation in relation to
 - requirements in the four domains of science and scholarship, clinical practice, health and society, and professionalism. (B 1.4.1)
 - appropriate foundation for future careers in any branch of medicine. (B 1.4.2)
 - their future roles in the health sector. (B 1.4.3)
 - their subsequent postgraduate training. (B 1.4.4)
 - their commitment to lifelong learning. (B 1.4.5)

- the health needs of the community, the needs of the health care system and other aspects of social accountability. (B 1.4.6)
- ensure appropriate student conducts with respect to fellow students, faculty members, other health care professionals, patients and their families. (B 1.4.7)

Quality development standards:

The medical school **should**

- specify and co-ordinate the linkage of outcomes to be acquired by graduation with acquired outcomes in postgraduate training. (Q 1.4.1)
- specify requirements for and expected outcomes of student engagement in medical research. (Q 1.4.2)
- draw attention to global health related outcomes. (Q 1.4.3)

Annotations:

- *Educational outcomes* refer to statements of science and scholarship, clinical practice, health and society, and professionalism that students demonstrate at the end of a period of learning, which include documented knowledge and understanding of (a) the basic biomedical sciences; (b) the preventive medicine including public health, health education and promotion; (c) the behavioral and social sciences, including medical ethics and health laws; (d) the clinical sciences, including clinical skills with respect to diagnostic procedures, practical procedures, communication skills, therapies and prevention of diseases, health promotion, rehabilitation, clinical reasoning and problem solving; (e) the ability to undertake lifelong learning and demonstrate professionalism in connection with different roles of a physician, also in relation to the medical profession.
- *Appropriate student conducts* must be specified in the student manual and relevant documents.
- *Life-long learning* is the professional responsibility to keep up to date in knowledge and skills through assessments and reflection or recognized continuing professional development (CPD) or continuing medical education (CME) activities. CPD includes all activities that physicians undertake, formally and informally, to maintain, update, develop and enhance their knowledge, skills and attitudes in response to the needs of their patients. CPD is a broader concept than CME, which describes continuing education in the knowledge and skills of medical practice.
- *Global health* refers to the health-related issues with impacts across national boundaries and need to be addressed by international collaborations.

2. Education Programme

2.1 Curriculum design and instructional methods

Basic standards:

The medical school **must**

- make its curriculum suitable for the mission, objectives and educational outcomes of the school based upon the health needs of the community and society, reflecting the advances in medical sciences and the transforming trends of healthcare services. (B 2.1.1)
- ensure that the curriculum upholds the principles of strengthening foundational learning and skills training, emphasizing professionalism and personal quality development. (B 2.1.2)
- define the curricular models. (B 2.1.3)
- define the instructional and learning methods employed. (B 2.1.4)
- ensure that the curriculum prepares students.. (B 2.1.5)
- ensure that the curriculum is delivered in accordance with principles of equality. (B 2.1.6)

Quality development standards:

The medical school **should**

- use a curriculum and instructional/learning methods that stimulate, prepare and support students to take responsibility for their own learning process. (Q 2.1.1)

Annotations:

- *Curriculum* in this document refers to the educational programme and it includes a statement of the intended educational outcomes, the contents/syllabi, experiences and processes of the programme, consisting of a description of the structure of the planned instructional and learning methods and assessment methods.
- *Curriculum models* would include models based on disciplines, organ systems, clinical problems/tasks or disease patterns.
- *Instructional and learning methods* encompass lectures, small-group teaching, problem-based and case-based learning, peer assisted learning, laboratory exercises, clerkship and internship, bedside 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, sexual orientation, socio-economic status, and taking into account physical capabilities.
- *The curriculum and instructional methods* would be based on contemporary learning principles.

2.2 Scientific method

Basic standards:

The medical school **must**

- throughout the curriculum teach
 - the principles of scientific methods, including analytical and critical thinking. (B 2.2.1)
 - medical research methods. (B 2.2.2)
 - evidence-based medicine. (B 2.2.3)

Quality development standards:

The medical school **should**

- encourage students to participate in research projects and include scientific research training throughout the curriculum. (Q 2.2.1)
- in the curriculum include elements of original or advanced research. (Q 2.2.2)
- integrate scientific and medical research method principles and the application of evidence-based medicine throughout the curriculum. (Q 2.2.3)

2.3 Behavioural and social sciences, medical ethics and natural sciences

Basic standards:

The medical school **must**

- in the curriculum identify and incorporate the contributions of:
 - behavioral sciences, social sciences, medical ethics and medical jurisprudence. (B 2.3.1)
 - natural sciences. (B 2.3.2)

Quality development standards:

The medical school **should**

- in the curriculum adjust and modify the contributions of the behavioral and social sciences as well as medical ethics to:
 - scientific, technological and clinical developments. (Q 2.3.1)
 - current and anticipated needs of the society and the health care system. (Q 2.3.2)
 - changing demographic and cultural contexts. (Q 2.3.3)

Annotations:

- *Behavioral and social sciences* would conform to the local needs, interests and traditions – include medical ethics, medical jurisprudence, medical psychology, medical sociology and health services administration. The content and depth of each course depend on programme objectives. The medical school is encouraged to integrate behavioral and social sciences effectively into the course contents of medical disciplines or other professional trainings.
- *Natural sciences* include mathematics, physics and chemistry, etc.

2.4 Basic biomedical sciences

Basic standards:

The medical school **must**

- in the curriculum identify and incorporate the contributions of the basic biomedical sciences to create understanding of scientific knowledge, concepts and methods fundamental to acquiring and applying clinical sciences. (B 2.4.1)

Quality development standards:

The medical school **should**

- in the curriculum adjust and modify the contributions of the biomedical sciences to the scientific, technological and clinical developments as well as current and anticipated needs of the society and the health care system. (Q 2.4.1)

Annotation:

- *Basic biomedical sciences* would include core courses like human anatomy, histology and embryology, pathology, pathogenic biology, cell biology, medical genetics, biochemistry, physiology, medical immunology, pharmacology, pathophysiology and developing courses like molecular biology, neurobiology, biophysics and bioinformatics. All the above courses can also be presented in the form of integrated contents. Core courses are always the compulsory courses and developing courses can be compulsory or elective courses based on programme objectives.

2.5 Public health sciences

Basic standards:

The medical school **must**

- in the curriculum identify and incorporate the contributions of public health sciences to develop students' awareness of population health and disease prevention strategies, allowing them to function well in health education, promotion and management efforts. (B 2.5.1)

Quality development standards:

The medical school **should**

- ensure that the curriculum expands the students' vision in global health so the learners understand the global health issues and think in global health perspectives. (Q 2.5.1)

Annotations:

- *Public health sciences* include medical statistics, epidemiology, global health, health promotion and health education, maternal and child health care, child and adolescent health, social medicine, environmental health, nutrition and food hygiene, occupational health and occupational medicine.

2.6 Clinical sciences and skills

Basic standards:

The medical school **must**

- in the curriculum identify and incorporate the contributions of the clinical sciences to ensure that students spend the specified amount of time in training in major clinical disciplines and acquire sufficient knowledge and clinical and professional skills to assume appropriate responsibilities after graduation. (B 2.6.1)
- ensure that students spend a reasonable part of the programme in planned contact with patients in relevant clinical settings. (B 2.6.2)
- ensure the effective integration of medical knowledge and clinical clerkship. (B 2.6.3)
- ensure that each student completes his or her internship at a clinical site that has written agreement with the medical school and possesses appropriate teaching qualifications. (B 2.6.4)
- satisfy the time requirement of clinical internship prior to graduation, which is no less than 48 weeks, and cover major secondary disciplines such as internal medicine, surgery, pediatrics, gynecology and obstetrics in the internship. (B 2.6.5)
- organize clinical trainings with appropriate attention to patient and student safety. (B 2.6.6)
- in the curriculum identify and incorporate the contributions of communication skills related with the doctors' responsibilities to ensure that students communicate professionally with patients, their families, peers and other medical team members. (B 2.6.7)
- introduce the basic principles of traditional Chinese medicine in the curriculum. (B 2.6.8)
- encourage early exposure of students to patients in professional settings. (B 2.6.9)

Quality development standards:

The medical school **should**

- ensure that each student has opportunities for early patient contact, and in a gradual manner, for participation in patient care under close supervision. (Q 2.6.1)
- structure different elements of clinical skills training according to the phases of student

learning in the programme. (Q 2.6.2)

- provide students opportunities for interprofessional education (IPE) in which students learn teamwork from professionals of other medical specialties. (Q 2.6.3)

Annotations:

- *The clinical sciences* would include core courses like diagnostics, internal medicine (neurological diseases and infectious diseases), surgery (general surgery and anesthesiology), gynecology, obstetrics, pediatrics, psychiatry, ophthalmology, otolaryngology and head and neck surgery, dermatovenerology, stomatology, traditional Chinese medicine or other ethnomedicine and general practice/family medicine; and developing courses like emergency medicine, rehabilitation, geriatrics, oncology, palliative medicine, physical therapy, radiological treatment, clinical pharmacology (including the reasonable application of antibiotics). The courses for clinical medicine can also be presented as integrated course contents. Refer to 2.4 (basic biomedical sciences) for the meanings of core courses and developing courses.
- *Clinical skills* include history taking, physical examination, communication skills, auxiliary examination, clinical procedural performance, diagnosis and differentiated diagnosis, and prescription and treatment practices.
- *Professional skills* would include patient management skills, team-work/team leadership skills, and inter-professional trainings.
- *A reasonable part* would mean the fact that the clinical teaching time is no less than half of the programme and that the contact with patients in the clinical settings accounts for no less than one third of the programme.
- *Clinical sites with teaching qualification* indicate qualified teaching hospitals that have been accredited by education and/or health authorities.
- *Major secondary disciplines* in the internship would include internal medicine (with respiratory, cardiovascular and gastrointestinal medicine for no less than 3 weeks respectively), surgery (with general surgery including gastrointestinal and hepatobiliary for no less than 6 weeks), gynecology and obstetrics, and pediatrics.
- *Patient and student safety* would require close supervision of clinical activities conducted by students and provide safe learning environment for students.
- *Early patient contact* would partly take place in primary care settings and would primarily include history taking, physical examination and communication with patients, families and healthcare professionals.

2.7 Curriculum structure, composition and duration

Basic standards:

The medical school **must**

- 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. (B 2.7.1)

- allow optional (elective) courses and define the balance between the core and optional courses as part of the educational programme. (B 2.7.2)

Quality development standards:

The medical school **should**

- in the curriculum:
 - ensure horizontal integration of associated sciences, disciplines and subjects. (Q 2.7.1)
 - ensure vertical integration of the clinical sciences with the basic biomedical and the behavioural and social sciences. (Q 2.7.2)
 - introduce complementary medicine and their roles. (Q 2.7.3)

Annotations:

- Examples of *horizontal integration* would be integrating basic biomedical 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 integration* would be integrating metabolic disorders with biochemistry or cardiology as in cardiovascular physiology.
- *Complementary medicine* would include traditional or alternative therapeutic practices. In general, it includes traditional Chinese medicine, Mongolian medicine and Tibetan medicine, as well as non-traditional medicine like health food and food therapies.

2.8 Programme management

Basic standards:

The medical school **must**

- 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. (B 2.8.1)
- in its curriculum committee ensure proper representation of staff and students. (B 2.8.2)

Quality development standards:

The medical school **should**

- through its curriculum committee plan and implement innovations in the curriculum. (Q 2.8.1)
- in its curriculum committee include representatives of other stakeholders. (Q 2.8.2)

Annotations:

- *The authority of the curriculum committee* would include authority over specific departmental and disciplinary interests, and the control of the curriculum within existing rules and regulations as defined by the governance structure of the institutions 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 evaluations.
- *Other stakeholders* would include other participants in the educational process, representing the teaching hospitals, clinical facilities, alumni, other health professions or faculties in the University. Other stakeholders might also include groups representing the community and public (e.g. users of the healthcare delivery system, including patient organizations).

2.9 Linkage with medical practice and the health sector

Basic standards:

The medical school **must**

- ensure operational linkage between the educational programme and the subsequent stages of training or practice after graduation, making it possible for the graduates to receive continuous medical education. (B 2.9.1)

Quality development standards:

The medical school **should**

- ensure that the curriculum committee seeks input from institutions in which graduates will be expected to work, and modify the programme accordingly, and considers programme modification in response to feedback from the community and society. (Q 2.9.1)

Annotation:

- *The operational linkage* implies identifying healthcare needs and defining required educational outcomes. This requires clear definition and description of the elements within the educational programmes and their inter-relationships 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 the basis for career guidance.

3. Assessment of Students

3.1 Assessment methods

Basic standards:

The medical school **must**

- define, state and publish the principles, methods and practices used for assessment of its students, including the type and frequency of assessment, the criteria for setting pass marks, composition of marks, grade boundaries and number of allowed retakes. (B 3.1.1)
- ensure that assessment covers the areas of science and scholarship, clinical practice, health and society, professionalism. (B 3.1.2)
- use a wide range of assessment methods and formats depending on different objectives. (B 3.1.3)
- use a system for appeal of assessment results. (B 3.1.4)

Quality development standards:

The medical school **should**

- actively initiate research of its assessment system and methods, and incorporate new assessment methods where appropriate. (Q 3.1.1)
- ensure that assessments are open to scrutiny by external experts. (Q 3.1.2)

3.2 Relationship between assessment and learning

Basic standards:

The medical school **must**

- use assessment principles, methods and practices that
 - ensure that the intended educational outcomes are met by the students. (B 3.2.1)
 - promote student learning. (B 3.2.2)
 - provide an appropriate balance of formative and summative assessments to guide both learning and decisions about academic progress. (B 3.2.3)

Quality development standards:

The medical school **should**

- adjust the number and nature of examination of curricular elements to encourage both acquisition of the knowledge base and integrated learning. (Q 3.2.1)
- ensure timely, specific, constructive and fair feedback to students on the basis of

assessment results. (Q 3.2.2)

Annotations:

- *Assessment principles, methods and practices* would include consideration of number, time of examinations and other tests, balance between written and oral examinations, use of normative and criterion referenced judgements, and use of special types of examinations, e.g. objective structured clinical examination (OSCE), or mini clinical evaluation exercise (Mini-CEX), direct observation of procedural skills (DOPS) and computer-based case simulations (CCS).
- *Summative assessment* is performed after the educational activities, which is used to determine whether the education objectives have been achieved. Summative assessment focuses on the evaluation of performances and learning outcomes.
- *Formative assessment* stresses the combination of education and evaluation procedures, attaches importance to and emphasizes the timely feedback and modification during the course of teaching and learning. Formative assessment is both helpful for the teachers to know their teaching effectiveness and optimize teaching, and for the students to evaluate their own progress in learning and adjust their learning strategies accordingly.
- *Integrated learning* would include consideration of using integrated assessment, while ensuring reasonable tests of knowledge of individual disciplines or subject areas.

3.3 Analysis and feedback of assessment results

Basic standards:

The medical school **must**

- analyze the assessment results based on the educational measurement after all the examinations are finished. (B 3.3.1)
- provide feedback to students, faculty and academic affairs administrators. (B 3.3.2)

Quality development standards:

The medical school **should**

- apply the analyzed results in the improvement of teaching and learning. (Q 3.3.1)
- enhance the reform efforts and research of assessments. (Q 3.3.2)

Annotation:

- *Analysis of assessment results* includes the degree of difficulties, differentiation, reliability, validity, content coverage, and student performance scores of the tests.

4. Students

4.1 Admission policy and selection

Basic standards:

The medical school **must**

- formulate an admission plan based on the national admission policy and periodically review it for adjustment. (B 4.1.1)
- pay attention to the diversity of students on the premise of guaranteeing the quality of enrolled students. (B 4.1.2)
- have no discrimination and bias under the condition of meeting the requirements of the program. (B 4.1.3)
- make the admission policies known to the public, including the school prospectus, programs, admission plan, tuition and fees, scholarships, and mechanism for appeal, etc., and describe the process of student selection and make the curriculum known to the applicants on the internet. (B 4.1.4)
- have a policy and implement a practice for transfer of students from other programmes and institutions. (B 4.1.5)

Quality development standards:

The medical school **should**

- state clearly the relationship between student selection and the mission of the school, the educational programme and desired qualities of graduates. (Q 4.1.1)
- use a system for appeal of admission decisions. (Q 4.1.2)

Annotations:

- *Admission plan* would imply adherence to the national regulations and policies to ensure the fair and equal treatments of students in the educational process.
- *The process of selection* would include both rationale and methods of student admissions such as the use of high school performance scores, other relevant academic or educational experiences, college entrance examination scores and student performance in interviews, including the evaluation of student motivations to become doctors, participation in social service projects and psychological tests. Selection would also take into account the differences in admission standards due to ethnic diversities and variations related to distinctive medical practices.

4.2 Student intake

Basic standards:

The medical school **must**

- define the size of student intake based on relevant national policies, the health needs of the community and society, and the educational resources of the school. (B 4.2.1)

Quality development standards:

The medical school **should**

- take the advice of stakeholders into consideration when reviewing and adjusting the size of student intake. (Q 4.2.1)

Annotations:

- *The health needs of the community and society* would include consideration of national and regional demands for medical workforce as well as gender, ethnicity and other social requirements (socio-cultural and linguistic characteristics of the population), including the potential need of a special recruitment, admission and induction policy for underprivileged students and minorities.
- *Educational resources* would include the consideration of shared use of clinical education resources by the students of other health related programs.
- *Stakeholders* would include the education and health authorities, health facilities, faculty and students, and representatives of the public.

4.3 Student counseling and support**Basic standards:**

The medical school **must**

- have a system for academic counseling and support of its student population. (B 4.3.1)
- offer support and guidance to students in their activities of learning, living, taking part-time jobs and choosing careers. (B 4.3.2)
- have an effective system of psychological counseling. (B 4.3.3)
- allocate resources for student support. (B 4.3.4)
- ensure confidentiality in relation to counseling and support. (B 4.3.5)

Quality development standards:

The medical school **should**

- offer individualized academic guidance and counseling based on the student progress in learning. (Q 4.3.1)
- offer students career guidance and planning. (Q 4.3.2)

Annotations:

- *Academic counseling* would include questions related to choice of electives, residency preparation and career guidance, etc.
- *Student support* would include medical services, career guidance, suitable accommodation for students with disabilities, and implementation of a student aid system offering scholarships, loans, subsidies and allowances for disadvantaged students in need of financial assistance.
- *Individualized academic guidance and counseling* would include appointing academic mentors for individual students or small groups of students.

4.4 Student representation

Basic standards:

The medical school **must**

- formulate and implement a policy, that ensures the participation of student representatives and appropriate participation in the design, management and evaluation of the curriculum, and in other matters relevant to students. (B 4.4.1)
- support students to establish student organizations allowed by law, guide and encourage organized student activities in providing equipment, spaces, and technical and financial support. (B 4.4.2)

Quality development standards:

The medical school **should**

- have student representatives serving in relevant committees, bodies of the school and organizations of the community and ensure that they have certain roles to play. (Q 4.4.1)

Annotation:

- *Student organizations* would include relevant bodies for student self governance, self education and self service.

5. Academic Staff/Faculty

5.1 Recruitment and selection policy

Basic standards:

The medical school **must**

- formulate and implement a staff qualification certification and selection system, to make sure that the teachers meet the performance demands in teaching, research and service functions. (B 5.1.1)
- have a well-structured faculty team composed of a sufficient number of qualified academic staff/faculty based on the school mission and scale. (B 5.1.2)
- outline the responsibilities of the academic staff/faculty to ensure an appropriate ratio and balance between teaching, research and service functions. (B 5.1.3)
- set merit criteria for teaching, research and services, and evaluate the performance of the academic staff/faculty regularly. (B 5.1.4)
- have a corresponding mechanism to ensure that the results of teacher performance evaluation play a role in school decisions for promotions and appointments of academic, administrative or entitlement nature. (B 5.1.5)

Quality development standards:

The medical school **should**

- in its policy for staff recruitment and selection take into account the school mission and the requirements for reform and development. (Q 5.1.1)
- take into account the reasonable and effective utilization of personnel, funds and resources when formulating the selection policy to ensure the balanced development of teaching, research and service functions. (Q 5.1.2)

Annotations:

- *Recruitment and selection policy* would include consideration of ensuring a sufficient number of highly qualified basic biomedical scientists, behavioural and social scientists and clinicians to deliver the curriculum.
- *Qualified academic staff/faculty* would indicate that the academic staff/faculty should possess good professional ethics and the scholarship and teaching ability that match their academic ranks, deliver corresponding courses and assume required teaching assignments, and be certified by the corresponding educational authorities. Non-medical staff should have the necessary knowledge of medical education.
- *Merits* would be measured by formal qualifications, professional experience, teaching awards, research output, student evaluation and peer recognition.

5.2 Staff activity and staff development

Basic standards:

The medical school **must**

- formulate and effectively implement policies related to faculty training, development, support and appraisal, to ensure that the central focus is on educating students. These policies should
 - guarantee the legal rights of the academic staff/faculty. (B 5.2.1)
 - recognize and support the professional development of the academic staff/faculty. (B 5.2.2)
 - encourage that the academic staff/faculty apply their clinical experience and research findings in teaching. (B 5.2.3)
 - ensure that the academic staff/faculty can be directly involved in the curriculum design and the decision-making process related to educational management. (B 5.2.4)
 - ensure sufficient knowledge by individual staff members of education objectives and the curriculum. (B 5.2.5)
 - make efforts to promote the communication among the academic staff/faculty. (B 5.2.6)
 - ensure that the academic staff/faculty possess and maintain their competence in teaching. (B 5.2.7)
 - allow a balance of faculty roles in teaching, research and service functions. (B 5.2.8)

Quality development standards:

The medical school **should**

- attach importance to the differences in courses and teaching models and reasonably allocate the academic staff/faculty based on the requirements of the curriculum. (Q 5.2.1)
- establish a mechanism for the academic staff/faculty to participate in the management and policy-making of the school/university. (Q 5.2.2)

Annotations:

- *Staff activity and development* would involve not only new teachers, but also all the teachers in basic biomedical sciences and the clinical sciences.
- *Staff development* would emphasize the promotion of teaching abilities. The departments for teacher support and development can provide training in educational theory, curriculum design, teaching methods and teacher evaluations.
- *Decision-making process related to educational management* would include having roles to shape decisions on student admission and services. The school should also ensure that teachers also take part in the decision-making of other important issues.

- *Sufficient knowledge by individual staff members of the curriculum* would include knowledge about instructional pedagogies, overall curricular contents, and assessment methods, for the purpose of fostering the cooperation of teachers and teaching content integration among different disciplines, and offering students appropriate guidance for learning.
- *Communication among the academic staff/faculty* would include interdisciplinary and cross-disciplinary communications, and in particular, the communications between teachers of the basic medical sciences and the clinical sciences.
- *Competence in teaching* would include adapting to the educational objectives of the school, following its basic principles, designing appropriate teaching activities, and choosing student assessment methods.
- *A balance of faculty roles in teaching, research and service functions* would include provision of protected time for each function. *Service functions* would include clinical duties in the health care delivery system, student guidance, participation in governance and management and other social services as well.

6. Educational Resources

6.1 Education budgets and allocation of resources

Basic standards:

The medical school **must**

- have sufficient financial support and reliable access to fund raising. (B 6.1.1)
- have the financial resources to sustain a sound program of medical education and institutional goals. (B 6.1.2)

Quality development standards:

The medical school **should**

- derive the present and anticipated financial resources from diverse sources. (Q 6.1.1)
- support research and implementation of medical education reforms financially. (Q 6.1.2)

Annotations:

- In the *financial resources*, the tuition charged by the medical school must be managed and used according to national regulations. The funds used for teaching and their proportion in the annual final account of the school must meet national regulations. The expenditures of educational funds should have an annual increase to ensure steady educational development.
- *Derive the present and anticipated financial resources from diverse sources* would include government appropriation, tuitions, investments made by civic organizations and private citizens, donations and funds, supports of affiliated and teaching hospitals, incomes from school-run enterprises and social services, etc.

6.2 Physical facilities

Basic standards:

The medical school **must**

- have sufficient physical facilities for staff and students to ensure that the curriculum can be delivered effectively. (B 6.2.1)
- ensure a learning environment, which is safe for staff, students and patients. (B 6.2.2)
- provide sites and equipment for simulated clinical training to students. (B 6.2.3)

Quality development standards:

The medical school **should**

- improve the learning environment by regularly updating and modifying or extending the physical facilities to match the developments of education programs. (Q 6.2.1)
- update and effectively utilize simulated clinical training equipment to develop simulation-based clinical pedagogies. (Q 6.2.2)

Annotations:

- *Physical facilities* would include all types of class-rooms, multimedia equipment, tutorial rooms, laboratories, equipment, specimen and consumable material for basic medical sciences, clinical skills center and simulation equipment, clinical demonstration rooms, libraries, information technology and network resources. School should also provide student amenities including accommodation and recreational facilities for students.
- *A safe learning environment* would include provisions of necessary information and protection from harmful substances, specimens and organisms, laboratory safety regulations and safety equipment. A medical school publishes policies and procedures to ensure student safety and to address emergency and disaster preparedness.

6.3 Clinical training resources

Basic standards:

The medical school **must**

- have tertiary class-A affiliated hospitals as clinical teaching sites. (B 6.3.1)
- have sufficient clinical teaching sites to ensure adequate clinical experience and necessary resources in clinical teaching, including sufficient patients and clinical training facilities. The number of students in the medical specialties and the number of patient beds in these hospitals should have a ratio of less than 1:1. (B 6.3.2)
- have enough staff from appropriate disciplines, and with the necessary skills and experience to deliver teaching and support students' learning. (B 6.3.3)

Quality development standards:

The medical school **should**

- continuously evaluate, adapt and improve clinical training resources to meet the needs of teaching and healthcare services. (Q 6.3.1)

Annotations:

- *Affiliated hospitals* are subsidiaries of the medical school, which are under the direct control of the medical school.
- *Clinical teaching sites* encompass teaching hospitals, training hospitals and community health centers in addition to the affiliated hospitals. A teaching hospital must meet the following requirements: governmental documents certifying it as a clinical teaching site of a

medical school; written agreements between the medical school and the hospital; be capable of and responsible for delivering the medical courses such as lectures, tutorials and internship. A clinical teaching site must have specialized organizations and staff in charge of the administration and management of clinical trainings.

- *Clinical teaching resources* also include adequate numbers of patients with wide range of diseases, in addition to pedagogical equipment.
- *Medical specialties* in this document refer to the medical specialties that award the degree of Bachelor of Medicine, including clinical medicine, stomatology, anesthesiology, medical radiology, ophthalmology and optometry, psychiatry, radioactive medicine, traditional Chinese medicine, clinical discipline of Chinese and western integrative medicine, basic medicine, forensic medicine and preventive medicine. The students of medical specialties include undergraduate students from the above specialties, overseas students taught in Chinese/English and junior college students.
- *Patient beds* refer to the total in affiliated hospitals and teaching hospitals. The patient beds in affiliated hospital refer to the sum of them in the affiliated comprehensive hospitals and specialized hospitals responsible for clinical teaching and practices. The patient beds in teaching hospitals refer to the number of beds in the teaching hospitals responsible for the whole process of clinical teaching, clerkship and internship and the hospitals should also possess graduate students of clinical medicine, but the patient beds in the specialized hospitals are excluded. The number of patient beds is recognized as the number in the official reports of the hospital submitted to the health authorities at the end of the previous year. The number of patient beds should be the smaller one of the number registered and the number used.
- *Evaluation of clinical training resources* would include the assessment in regards of settings, equipment, number and categories of patients, as well as health practices, supervision and administration to measure whether they meet the teaching requirements. The resources in the affiliated and teaching hospitals shared by students from other medical schools should also be considered.

6.4 Information technology

Basic standards:

The medical school **must**

- own adequate information and communication technology infrastructure and support systems. (B 6.4.1)
- formulate and implement policies which address the effective use of information and communication technology and resources in medical education to ensure the delivery of the educational program. (B 6.4.2)

Quality development standards:

The medical school **should**

- enable teachers and students to use existing and explore appropriate new information technology to support self-directed learning. (Q 6.4.1)

- optimise student access to relevant patient data and health care information systems. (Q 6.4.2)

Annotation:

- *Effective use of information and communication technology* would include the use of computers, internal and external networks and other means. This would include coordination with library resources and IT services of the institution. The policy would include common access to all educational items through a learning management system. Information and communication technology would be useful for preparing students for evidence-based medicine and life-long learning through continuing professional development (CPD)/ continuing medical education (CME).

6.5 Educational expertise

Basic standards:

The medical school **must**

- formulate and implement a policy that have access to educational expertise involved in deciding on important issues concerning medical education, including developing and adjusting the educational curriculum and teaching and assessment methods. (B 6.5.1)

Quality development standards:

The medical school **should**

- allow the educational experts to play an important role in faculty development. (Q 6.5.1)
- pay attention to the development of in-house expertise in program evaluations and in research on medical education . (Q 6.5.2)

Annotation:

- *Educational expertise* would rely on experts who had experience studying and solving problems in medical education and these experts would include teachers, medical doctors, administrators and researchers with research experience in medical education. It can be provided by an education development unit or a team of interested and experienced teachers at the institution or be acquired from another national or international institution.

6.6 Educational exchanges

Basic standards:

The medical school **must**

- formulate and implement a policy for national and international collaboration with other

educational institutions. (B 6.6.1)

- facilitate regional and international exchange of staff and students by providing appropriate resources. (B 6.6.2)

Quality development standards:

The medical school **should**

- formulate and implement a policy for transfer of educational credits. (Q 6.6.1)
- ensure that exchange is purposefully organized, taking into account the needs of staff and students, respecting the customs of each teaching site and following ethical principles. (Q 6.6.2)

Annotation:

- *A policy for transfer of educational credits* would be facilitated by establishing agreements on mutual recognition of educational elements and through active programme coordination between medical schools. It would also be facilitated with the use of a transparent system of credit units and flexible interpretation of course requirements.

7. Programme Evaluation

7.1 Mechanisms for programme monitoring and evaluation

Basic standards:

The medical school **must**

- establish a mechanism for programme monitoring and evaluation with emphasis on the monitoring and evaluation of curricula, educational process and outcome. (B 7.1.1)
- establish detailed requirements for all educational components according to the quality standards of medical specialties. (B 7.1.2)
- ensure the relevant results of evaluation influence the curriculum. (B 7.1.3)
- enable the faculty, students and administrators to understand the system of education program monitoring and evaluation. (B 7.1.4)

Quality development standards:

The medical school **should**

- periodically evaluate the programme by comprehensively addressing the context of the educational process, the specific components of the curriculum, the long-term outcomes acquired, and its social accountability. (Q 7.1.1)
- follow up student progress, such as learning processes, changes in learning abilities, and student life and academic assistance, and give timely feedback to the students. (Q 7.1.2)
- arrange training for related personnel in charge of the evaluation, so that they are able to choose and use appropriate and effective evaluation methods. (Q 7.1.3)

Annotations:

- *Programme evaluation* is the process of systematic gathering of information to judge the effectiveness and adequacy of educational programme, educational process and long-term outcomes, so as to provide references for the improvement of education quality and making decisions on education issues. It would imply the use of reliable and valid methods of data collection and analysis. The information and data may include the quality evaluation documents of universities or medical school, such as rules and policies, brochures, meeting minutes, joint agreements with other educational institutions, supervisory reports and student evaluation results, etc.
- *Programme monitoring* would imply the routine collection of data about key aspects of the curriculum for the purpose of ensuring that the educational process is on track and for identifying any areas in need of intervention.
- *The context of the educational process* would include the organization and resources as well as the learning environment and culture of the medical school.
- *Specific components of the curriculum* would include course description, teaching and

learning pedagogies, clinical rotations and assessment methods.

- *Long-term outcomes acquired* would be measured by e.g. results at national licensing examinations, qualifying examinations for standardized training of residents, career choices, employer comments on performance of graduates, etc, and these would provide the basis for curricular improvement.

7.2 Teacher and student feedback

Basic standards:

The medical school **must**

- apply multiple evaluation methods, systematically seek and analyse information, and give feedback to teachers and students. (B 7.2.1)

Quality development standards:

The medical school **should**

- use feedback results for programme development and achieve expected improvement. (Q 7.2.1)

Annotation:

- *Feedback* would include information about the processes and outcomes of the educational programmes. It would also include information about school policies and regulations malpractices or inappropriate conducts involving teachers or students with or without legal consequences.

7.3 Performance of students and graduates

Basic standards:

The medical school **must**

- analyse performance of cohorts of students and graduates in relation to its mission, intended educational outcomes, curriculum, and provision of resources. (B 7.3.1)

Quality development standards:

The medical school **should**

- use the results of student performance evaluations to shape admission policies, revise education programs and offer consultation services to students. (Q 7.3.1)

Annotation:

- Measures of *performance of graduate cohorts* would include information about career choice, performance in clinical service delivery and post-graduation promotion as well as other job performance measures for graduates.

7.4 Involvement of stakeholders

Basic standards:

The medical school **must**

- in its programme monitoring and evaluation activities involve its principal stakeholders on campus such as academic staff, students and administrators. (B7.4.1)

Quality development standards:

The medical school **should**

- encourage other stakeholders to contribute to its course and programme evaluation and have access to the evaluation results. (Q 7.4.1)
- seek other stakeholders' feedback on the performance of graduates and on the curriculum. (Q 7.4.2)

Annotation:

- *Other stakeholders* would include other representatives of academic and administrative staff, representatives of the community and public (e.g. users of the health care system), education and health care authorities, professional organizations, medical scientific bodies and postgraduate educators.

8. Scientific Research

8.1 Education and scientific research

Basic standards:

The medical school **must**

- formulate and implement a policy that promotes the coordinated development of scientific research and education programs. (B 8.1.1)
- use scientific research and scholarship as a basis for curricular development and implementation. (B 8.1.2)
- strengthen the study of medical education and management, to provide theoretical basis for the educational reform and development. (B 8.1.3)

Quality development standards:

The medical school **should**

- incorporate scientific research activities and outcomes into the educational process, to train students' ability in scientific thinking, scientific methods and spirits of science, and to ensure positive interactions of scientific research and education activities. (Q 8.1.1)

Annotation:

- *Scientific research* encompasses the scientific activities in biomedical, clinical, behavioral and social sciences. Its influence on current teaching would facilitate teaching of scientific methods and evidence-based medicine.

8.2 Scientific research by staff

Basic standards:

The medical school **must**

- encourage academic staff to conduct scientific research and provide basic resources needed for the complementary development of scientific research and education. (B 8.2.1)
- ensure academic staff to be equipped with corresponding ability in scientific research. (B 8.2.2)

Quality development standards:

The medical school **should**

- encourage the active involvement of academic staff in the research of medical education, so as to enhance the teaching effectiveness. (Q 8.2.1)

8.3 Scientific research of students

Basic standards:

The medical school **must**

- use the scientific research activities as an important pathway to cultivate students' scientific literacy and creativity, and adopt effective measures to provide students with opportunities and resources needed for scientific research. (B 8.3.1)
- actively engage in activities which are instrumental in cultivating students' research competencies, such as incorporating comprehensive experiments and self-designed experiments in the curriculum, holding academic lectures and organizing scientific research teams. (B 8.3.2)

Quality development standards:

The medical school **should**

- provide funds for the scientific research activities of students. (Q 8.3.1)

9. Governance and Administration

9.1 Governance

Basic standards:

The medical school **must**

- define its governance structures and functions including their relationships within the university, and establish an effective management mechanism among university, medical school and affiliated hospitals, so as to ensure the coordinated development of healthcare delivery, education and research. (B 9.1.1)
- establish functional committees in its governance structures to review and discuss important issues involving the curriculum, educational reform and scientific research. The committees should include principal stakeholders on campus such as the school leaders, representatives of teachers and students, and administrative staff. (B 9.1.2)

Quality development standards:

The medical school **should**

- in its corresponding committees include other stakeholders such as relevant governmental authorities and regulatory bodies, education and health care sectors, and representatives of the community and public. (Q 9.1.1)
- ensure transparency of the work of governance and its decisions. (Q 9.1.2)

Annotations:

- *Governance* is primarily concerned with policy making, the processes of establishing general institutional and programme policies and also with control of the implementation of the policies. The institutional and programme policies would normally encompass decisions on the mission of the medical school, the curriculum, admission policy, staff recruitment and selection policy and decisions on interaction and linkage with medical practice and the health sector as well as other external relations.
- Members of the *committees* should be widely representative. The activities of the committees should be organized by the persons in charge, and recorded in details concerning the time, issues discussed, decisions and participants.
- *Transparency* would be obtained by newsletters, web-information or disclosure of meeting minutes.

9.2 Academic leadership

Basic standards:

The medical school **must**

- clearly illustrate the management responsibilities and authority of its academic leadership on medical education, and ensure the execution accordingly. (B 9.2.1)
- ensure that the leadership responsible for education is relatively stable. (B 9.2.2)
- pay attention to the professional education background of the leaders in charge of medical education. (B 9.2.3)

Quality development standards:

The medical school **should**

- periodically evaluate its academic leadership in relation to achievement of its mission and intended educational outcomes. (Q 9.2.1)

Annotations:

- *Academic leadership* refers to the positions and persons within the governance and management structures being responsible for decisions on academic matters in teaching, research and service, and would include dean, vice deans, provost, etc.
- *Management responsibilities and authority* emphasize especially on the rights of leaders in charge of teaching affairs involving formulating and implementing the curriculum, and rationally allocating education resources.

9.3 Administrative staff and management

Basic standards:

The medical school **must**

- have an administrative staff with effective management structures and advanced educational philosophy that is appropriate to support implementation of its curricular and related activities. (B 9.3.1)
- establish a sound management system and operating procedures to ensure rational deployment of resources. (B 9.3.2)

Quality development standards:

The medical school **should**

- formulate and implement an internal programme of quality assurance on the management including regular reviews. (Q 9.3.1)

Annotations:

- *Internal programme of quality assurance* would include consideration of the needs for

improvements and review of the management.

9.4 Interaction with health sector

Basic standards:

The medical school **must**

- have constructive interaction and communication with the health related sectors for support to medical education. (B 9.4.1)
- sign agreements with relevant health sectors, so as to ensure the successful delivery of the curricula. (B 9.4.2)

Quality development standards:

The medical school **should**

- formalise extensive cooperation and exchanges with medical and health related sectors, so as to ensure a sustainable development. (Q 9.4.1)

Annotations:

- *Relevant health sectors* would include the healthcare delivery system, whether public or private, medical research institutions, institutions and regulatory bodies with implications for health promotion and disease prevention.
- To *formalise extensive cooperation and exchanges* would mean entering into formal agreements, stating the content and forms of collaboration, and/or establishing joint projects

10. Continuous Development

Basic standards:

The medical school **must**

- regularly review and evaluate self-development, understand its own problems and make continuous improvement. (B 10.0.1)

Quality development standards:

The medical school **should**

- base the process of continuous development on prospective studies and analyses and on results of local evaluation and the literature on medical education. (Q 10.0.1)
- ensure that the process of continuous development and restructuring leads to the revision of its policies and practices in accordance with past experience, present activities and future perspectives. (Q 10.0.2)
- address the following issues in its process of development:
 - adaptation of mission statement and outcomes to the scientific, socio-economic and cultural development of the society. (Q 10.0.3)
 - modification of the intended educational outcomes of the graduating students in accordance with documented needs of the environment they will enter. The modification might include clinical skills, public health training and involvement in patient care appropriate to responsibilities encountered upon graduation. (Q 10.0.4)
 - adaptation of the curriculum model and instructional methods to ensure that these are appropriate and relevant. (Q 10.0.5)
 - adjustment of curricular elements and their relationships in keeping with developments in the basic biomedical, clinical, behavioral and social sciences, changes in the demographic profile and health/disease pattern of the population, and socioeconomic and cultural conditions. The adjustment would ensure that new relevant knowledge, concepts and methods are included and outdated ones are discarded. (Q 10.0.6)
 - development of assessment principles, and methods and the number of examinations based on changes in intended educational outcomes and instructional methods. (Q 10.0.7)
 - adaptation of student recruitment policy, selection methods and enrollment to changing expectations and circumstances, human resource needs, and requirements of the educational programme. (Q 10.0.8)
 - adaptation of academic staff recruitment and development policy, updating of educational resources and optimizing the organizational structure and management according to changing needs. (Q 10.0.9)
 - refinement of the process of programme monitoring and evaluation, so that the evaluation results are able to demonstrate the achievement of teaching objectives in

time. (Q 10.0.1)

