



USAID
FROM THE AMERICAN PEOPLE

**HUMAN
RESOURCES
FOR HEALTH**

Higher Education Relevance and Quality Agency

National Accreditation and Quality Improvement Standards for
Medicine Degree Program

First Edition
July 2014

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ABBREVIATIONS

CPD	Continuing Professional Development
DVD	Digital Video Disk
FMOH	Federal Ministry of Health
HEI	Higher Education Institution
HERQA	Higher Education Relevance and Quality Agency
HIV	Human Immuno-deficiency Virus
ICT	Information and Communication Technology
IPD	Inpatient Department
IQA	Internal Quality Assurance
IT	Information Technology
IV	Intravenous
KSA	Knowledge, Skills, and Attitudes
NG	Nasogastric (Tube)
OPD	Outpatient Department
SOP	Standard Operating Procedure
STI	Sexually Transmitted Infection
TB	Tuberculosis
USAID	United States Agency for International Development
VHS	Virtual Host Storage
WFME	World Federation of Medical Education

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INTRODUCTION

Assuring the quality and relevance of higher education is recognized as a priority agenda both in the Education Sector Development Program IV and the Growth and Transformation Plan of Ethiopia. The Higher Education Proclamation 650/2009 mandated the Higher Education Relevance and Quality Agency (HERQA) to ensure that higher education institutions (HEIs) provide high-quality and relevant education. Moreover, in Article 22, the proclamation instructs all HEIs of Ethiopia to establish a reliable internal quality assurance (IQA) system.

The ultimate goal of IQA is to have a culture of quality care that ensures that quality is a focus of all the activities of an institution at all levels and is incorporated into the everyday work of the whole institutional community. A robust and transparent quality assurance system conveys confidence in the quality of the provision of a HEI to its staff, students, employers, and other stakeholders.

Increased public expectation for quality and ethical health care is necessitating changes in what health professionals are taught and how they are taught. On the other hand, the increasing need to train more health workers, coupled with rapid expansion in medical knowledge, presents a serious challenge to the quality of education of health professionals including doctors. Despite these challenges, many HEIs training health care providers do not have well-functioning quality systems that have been cascaded to the department level.

In response, HERQA, in collaboration with the Federal Ministry of Health (FMOH) and Jhpiego (under the Strengthening Human Resources for Health Project funded by the U.S. Agency for International Development [USAID]) has developed this accreditation and quality improvement standards for the medicine degree program. The standards will serve the following purposes:

- Provide a framework against which medical schools can measure themselves, the gaps, and implement quality enhancement programs.
- Guide regulatory authorities like HERQA to accredit medical education programs.
- Provide a framework for HERQA to conduct program-level quality audits and develop tailored feedback.
- Inform higher education institutions about the quality improvement standards in specific areas and encourage them to achieve the standards.

USE OF STANDARDS

It is the opinion of HERQA that the set of standards presented can be used nationally as a tool for quality assurance and improvement of undergraduate medical education. This could be done in different ways, such as:

1. Medical School Self-Evaluation of the Institution and Its Program

The primary intention of HERQA in introducing the standards as an instrument for quality improvement is to provide a framework against which medical schools can measure themselves in voluntary self-evaluation and self-improvement of the program.

2. External Evaluation or Peer Review

The process described can be further developed by inclusion of evaluation and counseling from external peer-review groups.

3. Combination of Self-Evaluation of Institution and Program and External Peer Review.

HERQA considers such a combination to be the most valuable method.

4. Recognition and Accreditation

Depending on local needs and traditions, this guideline can also be used by national or regional authorities/agencies dealing with recognition and accreditation of medical schools.

DEFINITIONS

The following terms are used frequently in this guideline. Hence it is important to define them to enhance understanding of the document.

Areas are defined as broad components in the structure, process, and outcome of medical education.

Sub-areas are defined as specific aspects of an area, corresponding to performance indicators.

Standards (one or more) are specified for each sub-area using two levels of attainment, and each standard is given a specific number. The standards are structured in 10 areas and 37 subareas.

Basic standard means that the standard must be met by every medical school and fulfilment demonstrated during evaluation of the school. *Basic standards are expressed by a “must.”*

Standard for quality improvement means that the standard is in accordance with international consensus about best practice for medical schools and basic medical education. Fulfilment of or initiatives to meet some or all of such standards should be documented by medical schools. Fulfilment of these standards will vary with the stage of development of the medical schools, their resources, and educational policy. Even the most advanced schools might not comply with all standards. Standards for quality improvement are expressed by a “should.”

Altogether the document includes 214 basic standards and 118 quality improvement standards.

Annotations are used to clarify, amplify, or exemplify expressions in the standards. It should be strongly emphasized that the content of the annotations should not be seen as prescriptive for institutions. The annotations do not add new criteria or requirements. The listing of example in annotations are in some cases exhaustive, in others not.

AREAS OF ACCREDITATION AND QUALITY IMPROVEMENT STANDARDS

HERQA has identified the following 10 aspects of operation, which will form the focus points for a quality audit model at program level in Ethiopian HEIs. They are closely related to the focus areas the Agency has been using for the past 9 years for institutional quality audit. The benefits, we believe, are twofold. One, using this model will help the Agency transfer the experience, knowledge, and skills acquired during the institutional quality audits undertaken so far to the program-level audit. Two, it will enable the Agency to conduct program-level audits in keeping with international norms, as most quality assurance agencies

seem to be comfortable with the use of all aspects of operation stated in the following 10 areas when assessing programs:

1. Program Goals and Learning Outcomes
2. Governance, Leadership, and Administration
3. Educational Resources
4. Academic and Support Staff
5. Student Admission and Support Services
6. Program Relevance and Curriculum
7. Teaching-Learning and Assessment
8. Student Progression and Graduate Outcomes
9. Continual Quality Assurance
10. Research and Development and Educational Exchanges

I. PROGRAM GOALS AND LEARNING OUTCOMES

I.1 PROGRAM GOALS/AIMS

Basic Standards

The medical school **must**:

- Define its program goals and make them known to its constituency (B 1.1.1)
- Ensure that the goal of the program is in line with, and supportive of, the vision and mission of HEI (B 1.1.2)
- Outline in its statement of program goals that the trained doctors are:
 - ◆ Competent at a basic level and capable of undertaking the role of doctors as defined by the health sector (B 1.1.3)
 - ◆ Prepared and ready for postgraduate education (B 1.1.4)
 - ◆ Committed to lifelong learning (B 1.1.5)
- Ensure that the mission encompasses the needs of the community, the health care system, and other aspects of social accountability (B 1.1.6)

Quality Improvement Standards

The medical school **should** ensure that the program goal addresses:

- Aspects of global health (Q 1.1.1)
- Medical research (Q 1.1.2)

Annotations

Program goals/outcomes are general statements of what the program intends to accomplish; they describe learning outcomes and concepts in general terms. They should also be consistent with the mission of the program and institution.

Constituency would include the leadership, staff, and students of the medical school as well as other relevant stakeholders.

Lifelong learning is the professional responsibility to keep up to date in knowledge and skills through appraisal, audit, reflection, or recognized continuing professional development (CPD). CPD includes all activities that doctors undertake, formally and informally, to maintain, update, develop, and enhance their knowledge, skills, and attitudes (KSA) in response to the needs of their patients.

Social accountability would include 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 developments 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. Social accountability is sometimes used synonymously with social responsibility and social responsiveness. In matters outside its control, the medical school would still demonstrate social accountability through advocacy and by explaining relationships and drawing attention to consequences of the policy.

Aspects of global health would include awareness of major international health problems, and also of health consequences of inequality and injustice.

I.2 PARTICIPATION IN FORMULATION OF THE PROGRAM GOALS AND OUTCOMES

Basic Standard

The medical school **must**:

- Ensure that its principal stakeholders participate in formulating program goals and outcomes (B 1.2.1)

Quality Improvement Standard

The medical school **should**:

- Ensure that the formulation of program goals and outcomes is based also on other relevant stakeholders (Q 1.2.1)

Annotations

Principal stakeholders include the students, faculty, Ministry of Education, professional associations, Ministry of Health, HERQA, education strategic center, and the public.

Other relevant stakeholders include community representatives, client associations, and partners.

I.3 INSTITUTIONAL AUTONOMY AND ACADEMIC FREEDOM

Basic Standards

The medical school **must** have institutional 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)
- Use of the allocated resources necessary for implementation of the curriculum (B 1.3.2)

Quality Improvement Standards

The medical school **should** ensure academic freedom for its staff and students:

- In addressing the actual curriculum (Q 1.3.1)
- In exploring the use of new research results to illustrate specific subjects without expanding the curriculum (Q 1.3.2)

Annotations

- *Institutional autonomy* would include appropriate independence from government and other counterparts (regional and local authorities, religious communities, private cooperations, the professional unions, and other interest groups) to be able to make decisions about key areas such as design of curriculum, assessments, student admissions, staff recruitment/selection and employment conditions, research, and resource allocation.
- *Academic freedom* would include appropriate freedom of expression, and freedom of inquiry and publication for staff and students.

I.4 EDUCATIONAL OUTCOMES/GRADUATE PROFILES/CORE COMPETENCIES/ OF THE PR

Basic Standards

The medical school **must**:

- Have clearly defined educational outcomes that are in line with and supportive of the program goals (B 1.4.1)
- Define the intended educational outcomes that students should exhibit upon graduation in relation to:
 - ◆ Their achievements at a basic level regarding KSA (B 1.4.2)
 - ◆ Their commitment to and skills in lifelong learning (B 1.4.3)
 - ◆ The health needs of the community, the needs of the health care system, and other aspects of social accountability (B 1.4.4)
- Ensure appropriate student conduct with respect to fellow students, faculty members, other health care personnel, and patients and their relatives (B 1.4.5)
- Make the educational outcomes known to the students and faculty (B 1.4.6)

Quality Improvement Standards

The medical school **should**:

- Review the outcomes periodically in consultation with principal stakeholders to ensure that the educational outcomes are in line with the needs of the health sector and the society (Q 1.4.1)
- Specify outcomes related to engagement of the students in medical research (Q 1.4.2)
- Ensure that educational outcomes address aspects of global health (Q 1.4.3)

Annotations

Educational outcomes, learning outcomes, or competencies refer to statements of knowledge, skills, and attitude that students are expected to demonstrate at the end of a period of learning. Educational/learning objectives are often described in these terms.

Outcomes within medicine and medical practice—to be specified by the medical school—would include documented knowledge and understanding of: a) the basic biomedical sciences; b) the behavioral and social sciences, including public health and population medicine; c) medical ethics, human rights, and medical jurisprudence relevant to the practice of medicine; d) the clinical sciences, including clinical skills with respect to diagnostic procedures, practical procedures, communication skills, treatment and prevention of disease, health promotion, rehabilitation, clinical reasoning, and problem solving; and e) the ability to undertake lifelong learning and demonstrate professionalism in connection with the different roles of the doctor, also in relation to the medical profession.

The characteristics and achievements the students display upon graduation can, for example, be categorized in terms of the doctor as a:

- a. Scholar and scientist,
- b. Practitioner,
- c. Communicator,

- d. Teacher,
- e. Manager, and
- f. Professional.

Refer to annotations in 1.1 for *lifelong learning* and *aspects of global health*.

Refer to annotations in 1.2 for *principal stakeholders*.

Appropriate student conduct would presuppose a written code of conduct.

2. GOVERNANCE, LEADERSHIP, AND ADMINISTRATION

2.1 GOVERNANCE OF THE PROGRAM

Basic Standard

The medical school **must**:

- Define its governance structures and functions including their relationships within the HEI (B 2.1.1)

Quality Improvement Standards

The medical school **should**:

- In its governance structures, set out the committee structure, and reflect representation from:
 - ◆ Academic staff (Q 2.1.1)
 - ◆ Students (Q 2.1.2)
 - ◆ Principal stakeholders (Q 2.1.3)
- Ensure transparency of the work of governance and its decisions (through newsletters, web information, disclosure of minutes, etc.) (Q 2.1.4)

Annotation

Governance means the act and/or the structure of governing the medical school. Governance is primarily concerned with policymaking, the processes of establishing general institutional and program policies, and also with control of the implementation of the policies. The institutional and program policies would normally encompass decisions on the mission of the medical school, 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.

Refer to annotation in 1.2 for *principal stakeholders*.

2.2 ACADEMIC LEADERSHIP OF THE PROGRAM

Basic Standards

The medical school **must**:

- Describe the responsibilities of its academic leadership for definition and management of the medical education program (Q 2.2.1)
- Have a designated leader (a medical doctor who has a Master's Degree or specialty certificate and 2 years of experience in the academic area) (B 2.2.2)

Quality Improvement Standard

The medical school **should**:

- Periodically evaluate its academic leadership in relation to achievement of its mission and intended educational outcomes (Q 2.2.1)

Annotation

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, deputy dean, vice deans, provost, heads of departments, course leaders, directors of research institutes and centers, as well as chairs of standing committees.

2.3 ADMINISTRATIVE STAFF AND MANAGEMENT

Basic Standard

The medical school **must**:

- Have an administrative and professional staff that is appropriate to:
 - ◆ Support implementation of its educational program and related activities (B 2.3.1)
 - ◆ Ensure good management and resource deployment (B 2.3.2)

Quality Improvement Standard

The medical school **should**:

- Formulate and implement an internal program for quality assurance of the management, including regular review (Q 2.3.1)

Annotations

Administrative staff in this document refers to the positions and persons within the governance and management structures being responsible for the administrative support to policymaking and implementation of policies and plans and would depending on the organizational structure of the administration include head and staff in the dean's office or secretariat, heads of financial administration, staff of the budget and accounting offices, officers and staff in the admissions office, and heads and staff of the departments for planning, personnel, and information technology (IT).

Management means the act and/or the structure concerned primarily with the implementation of the institutional and program policies including the economic and organizational implications, i.e., the actual allocation and use of resources within the medical school.

2.4 EDUCATIONAL BUDGET AND RESOURCE ALLOCATION

Basic Standards

The medical school **must**:

- Have a clear line of responsibility and authority for resourcing the curriculum, including a dedicated educational budget (Q 2.4.1)
- Allocate the resources necessary for the implementation of the curriculum and distribute the educational resources in relation to educational needs (B 2.4.2)
- Ensure that the budget allocation matches with student enrollment (B 2.4.3)

Quality Improvement Standards

The medical school **should**:

- Have autonomy to direct/control the budget and resources in order to achieve its program goals and the intended educational outcomes of the curriculum (Q 2.4.1)
- Have a transparent system of responsibility and accountability in the allocation, distribution, and use of the budget and other resources (Q 2.4.2)
- In distribution of the resources, take in to account development in medical sciences and health needs of the society (Q 2.4.3)

2.5 INTERACTIONS WITH HEALTH SECTOR

Basic Standards

The medical school **must**:

- Have constructive interaction with the health and health-related sectors of society and government (B 2.5.1)
- Formalize its collaboration (entering into formal agreements, stating content and forms of collaboration, and/or establishing joint contact and coordination committees as well as joint projects), including engagement of staff and students, with partners in the health sector (B 2.5.2)

Quality Improvement Standards

The medical school **should**:

- Periodically review its interaction with the health and health-related sectors (Q 2.5.1)
- Interact with health and health-related sectors based on principles of mutual benefit and shared governance (Q 2.5.2)

Annotations

Constructive interaction would imply exchange of information, collaboration, and organizational initiatives that would facilitate education of doctors so as to equip them with the qualifications needed by society.

The health sector would include the health care delivery system, whether public or private, research institutions, and other health sectors.

The health-related sector would—depending on issues and local organization—include institutions and regulating bodies with implications for health promotion and disease prevention (e.g., with environmental, nutritional, and social responsibilities).

Mutual benefit would mean both parties in agreement gain value out of the interaction. For example, a medical school sends students to a certain health facility for practice; in exchange, staff at the health care facility are given educational opportunities at the same school.

Shared governance would mean working together to make decisions for the good of both parties involved.

3. EDUCATIONAL RESOURCES

3.1. LECTURE HALLS/CLASSROOMS

Basic Standards

The medical school **must**:

- Have lecture halls/class rooms for group, tutorial and seminar activities with adequate space (1.4 m²/student for group/tutorial and 1.6 m²/student for seminar) (B 3.1.1)
- Ensure that the rooms are equipped with:
 - ◆ Sufficient and comfortable chairs and tables (movable armchairs and/or chairs with table (B 3.1.2)
 - ◆ Clean projection wall/screen (B 3.1.3)
 - ◆ Writing board with different colors of marker and board cleaner (B 3.1.4)
- Ensure that the rooms are well-illuminated (words written in pencil can be read from any corner of the room, and screen-projected words, pictures, and videos can be seen clearly without reflection from every corner) (B 3.1.5)
- Ensure that the rooms have adequate ventilation (open windows and/or AC, fans) (B 3.1.6)
- Have functional toilets separate for males and females near the classroom (B 3.1.7)
- Have a regular cleaning schedule and follow-up for the facility (B 3.1.8)
- Have a built-in overhead projector and/or LCD (liquid crystal display) with computer (B 3.1.9)
- Have a water source around/near the classroom (B 3.1.10)

Quality Improvement Standards

The medical school **should have**:

- A “smart classroom” (Q 3.1.1)
- Regular/scheduled facility inspection and maintenance services (Q 3.1.2)

Annotation

Smart classroom: A smart classroom is a traditional, lecture-style teaching space that has available technological equipment that can be used to aid and enhance instruction of a course. The traditional smart classroom is equipped with the basic technology that will enable students and/or teachers to connect their laptops to the video projector or to play a VHS (virtual host storage)/DVD (digital video disk) movie. The new standard TEC (technology-enhanced classroom) model includes:

- DVD/VHS combo
- RCA video and audio input
- Laptop VGA (video graphics array) and audio input
- Network connectivity
- Amplifier and speakers
- High-powered projector (3,000 lumens)
- Permanent projector screen (powered or pull-down)

3.2 OFFICE FOR STAFF

Basic Standards

The medical school **should have**:

- A school dean/head office equipped with:
 - ◆ Printer, scanner photocopy machine, and duplicating machine (B 3.2.1)
 - ◆ Fax and telephone (B 3.2.2)
 - ◆ Conference (meeting) table with chairs (B 3.2.3)
- An office for teaching and administration staffs with adequate space (2.0 m²/person) (B 3.2.4)
- The office for staff must be equipped with:
 - ◆ Computers with Internet access for each teaching staff (B 3.2.5)
 - ◆ Chairs and tables with drawers (B 3.2.6)
 - ◆ File cabinet and bookshelf (B 3.2.7)
 - ◆ Nearby toilets separate for males and females (1toilet for 20 instructors) (B 3.2.8)

Quality Improvement Standard

The medical school **should**:

- Have a regular maintenance schedule for office equipment (Q 3.2.1)

3.3 SKILL DEVELOPMENT CENTER/LABORATORY

Basic Standards

The medical school **must**:

- Have a laboratory to practice cadaver dissection, histology, physiology, pathology, microbiology, parasitology, pharmacology, clinical lab methods, and other clinical skills relevant to the profession (B 3.3.1)
- Ensure a learning environment that is safe for staff, students, patients and relevant to their future careers (B 3.3.2)
- Ensure that each laboratory room has:
 - ◆ Adequate space for skill demonstration, practice, and discussion (2.2 m²/student) (B 3.3.3)
 - ◆ An adequate supply of functional laboratory equipment to learn essential competencies (with the ratio of one piece of equipment for six students in each lab session) (see Annex I) (B 3.3.4)
 - ◆ Adequate supplies and chemicals as listed in the respective lab manuals (B 3.3.5)
 - ◆ A dedicated office (B 3.3.6)
 - ◆ Safety manuals, posted safety precautions, a fire extinguisher, an emergency shower, and infection prevention equipment (B 3.3.7)
 - ◆ Uninterrupted water and power supply for each bench (B 3.3.8)

- ◆ An adequate number of movable chairs, tables for each station, a labeled shelf with locks, and dust bins in all the stations (B 3.3.9)
- ◆ Audiovisual aids including video sets (B 3.3.10)
- ◆ Adequate illumination and ventilation (B 3.3.11)
- ◆ Adequate and up-to-date learning materials (reference books, checklists for all skills, standard operating procedures [SOPs], wall charts, posters, flow charts, electronic learning resources) (see Annex II for list of lab manuals) (B 3.3.12)
- ◆ A regular cleaning schedule and follow-up for the facility (B 3.3.13)

Quality Improvement Standards

The medical school **should**:

- Ensure that the skills lab is properly organized, and managed by a dedicated skills lab manager (Q 3.3.1)
- Be accessible for students' independent practice (Q 3.3.2)
- Have a system for tracking all materials and equipment after each practice (Q 3.3.3)
- Have a central research lab (core lab) where the staff and students undertake research activities (Q 3.3.4)
- Have a facility to house animals for the courses offered by the program and for research (Q 3.3.5)
- Have a regular maintenance schedule for the laboratory facility and equipment (Q 3.3.6)

Annotation

A safe learning environment would include provision of necessary information; protection from harmful substances, specimens and organisms; laboratory safety regulations; and safety equipment.

3.4 PRACTICAL TRAINING FACILITIES/CLINICAL PRACTICE SITES

Basic Standards

The medical school **must**:

- Define appropriate clinical/practicum site selection criteria that encompass but are not limited to:
 - ◆ Having an adequate client caseload and case mix as per the core competencies (B 3.4.1)
 - ◆ Having sufficient staff who are willing to be preceptors (B 3.4.2)
 - ◆ A range of clinical practice sites (primary, secondary, tertiary levels) and specialized research centers (B 3.4.3)
 - ◆ A practice standard of practical training facilities that matches what is taught in the school (B 3.4.4)
- Have a sufficient number and variety of practicum sites for mandatory and elective medical practice experiences, including sites for practice in:

- ◆ Internal medicine (outpatient department [OPD] and inpatient department [IPD]) (B 3.4.5)
- ◆ Surgery (OPD, IPD, and operating room organized to provide emergency and elective surgery (B 3.4.6)
- ◆ Pediatrics (inpatient and OPD including expanded program on immunization [EPI]) (B 3.4.7)
- ◆ Obstetrics and gynecology (OPD and inpatient) (B 3.4.8)
- ◆ Specialty care like HIV, TB, sexually transmitted infections (STIs) (B 3.4.9)
- ◆ Intensive care services (B 3.4.10)
- ◆ Dental clinic (B 3.4.11)
- ◆ ENT unit (B3.4.12)
- ◆ Ophthalmology unit (B 3.4.13)
- ◆ Dermatovenerology unit (B 3.4.14)
- ◆ Psychiatry unit (B 3.4.15)
- ◆ Radiology unit (B 3.4.16)
- Ensure the availability of necessary resources for giving the students adequate clinical experience, including national service delivery guidelines, personal protective equipment, learning tools (checklists, log book, SOPs), and other essential equipment (B 3.4.16)
- Ensure easy accessibility of clinical practice sites including transport facilities to distant sites (B 3.4.17)

Quality Improvement Standards

The medical school **should:**

- Periodically assess the quality of sites and preceptors in light of achieving curricular needs and identify potential additional sites when needed (Q 3.4.1)
- Discontinue relationships with the sites that do not maintain the preset quality criteria and are unable to do so after implementation of a remediation plan (Q 3.4.2)
- Ensure that the clinical practice sites have discussion rooms (Q 3.4.3)
- Ensure that the clinical practice sites have a mini-library with essential reference books and guidelines in the clinical practice site (Q 3.4.4)
- Use accredited clinical practice sites (Q 3.4.5)

3.5 INFORMATION TECHNOLOGY FACILITIES

Basic Standards

The medical school **must:**

- Ensure that students have access to computers with Internet connectivity (one computer for three students) (B 3.5.1)
- Have electronic educational resources available (B 3.5.2)
- Formulate and implement a policy that addresses effective use and evaluation of appropriate information and communication technology (ICT) for education (B 3.5.3)

Quality Improvement Standards

The medical school **should**:

- Have subscriptions to educational websites/resources for staff and students' use (Q 3.5.1)
- Ensure that the IT center is accessible for student independent learning (outside of working hours) (Q 3.5.2)
- Have regular/scheduled IT facility inspection and maintenance services (Q 3.5.3)

3.6 LIBRARY

Basic Standards

The medical school **must** have access to a library with:

- A qualified librarian, an assistant, catalogue clerks, and other subordinates (B 3.6.1)
- A seating capacity to accommodate 25% of the total number of students at a time (B 3.6.2)
- A separate reading room for instructors (B 3.6.3)
- A catalogue system (B 3.6.4)
- Adequate illumination and ventilation and be free from sound pollution (B 3.6.5)
- A nearby functional toilet with a water supply (B 3.6.6)
- Signs posted for appropriate behaviors (silence, no food and drinks, no smoking) (B 3.6.7)
- A schedule showing library working hours posted at the entry point (B 3.6.8)
- An adequate supply of recent textbooks (in a ratio of 1:5 students) and reference materials (in a ratio of 1:15 students) relevant to the courses taught (See Annex II) (B 3.6.9)
- Access to up-to-date and peer-reviewed journals (local and international) (B 3.6.10)
- Copies of relevant and updated national service delivery guidelines and protocols on priority health issues in the country (see Annex III) (B 3.6.11)

Quality Improvement Standards

The medical school **should have**:

- An automated library system (system for recording and cataloging material and for ensuring the security of materials) (Q 3.6.1)
- A system to take feedback from users and update its services on regular basis (Q 3.6.2)
- 24/7 access to services (Q 3.6.3)

Annotations

Catalogue system is a search and discovery tool that provides results from the library's online and print collections in a single search. It includes titles of printed books, journals, manuscripts, letters, and other material available at the library as well as links to the full text of millions of journal articles, digital images of graphics/illustrations, and manuscripts.

Automated library system: Library automation is the application of ICTs to library operations and services. The functions that may be automated are any or all of the following:

acquisition, cataloging, public access, indexing and abstracting, circulation, serials management, and reference.

3.7 STUDENT AMENITIES

Basic Standards

The medical school **must**:

- Have an entity/unit responsible for student support, addressing academic, social, financial, and personal needs (B 3.7.1)
- Ensure safe and adequate student facilities including lounges, catering, student housing (if possible), and sports and recreational facilities (B 3.7.2)
- Allocate resources (budget, facilities, and qualified personnel) for student support programs (B 3.7.3)
- Ensure the availability of a student clinic, counseling, and social support units at institution level (B 3.7.4)

Quality Improvement Standards

The medical school **should**:

- Have regular/scheduled facility inspection and maintenance services (Q 3.7.1)
- Have a student complex providing a variety of services (Q 3.7.2)
- Ensure that different facilities on campus are accessible for students with disabilities (B 3.7.5)

Annotation

Addressing social, financial, and personal needs would mean support in relation to social and personal problems and events, health problems, and financial matters, and would include access to health clinics, immunization programs, and health/disability insurance, as well as financial aid services in the form of bursaries, scholarships, and loans.

3.8 FINANCIAL RESOURCES

Basic Standard

The medical school **must**:

- Deploy financial resources to:
 - ◆ Support all aspects of the goals and strategic plan and ensure stability in the delivery of the program (B 3.8.1)
 - ◆ Allow effective faculty and support staff recruitment, retention, and development (B 3.8.2)
 - ◆ Maintain and improve physical facilities, equipment, and other educational and research resources (B 3.8.3)
 - ◆ Measure, record, analyze, document, and distribute assessment and evaluation activities (B 3.8.4)
 - ◆ Ensure experiential learning and preceptor support for smooth curriculum implementation (B 3.8.5)

Quality Improvement Standards

The medical school **should**:

- Develop and maintain a broad base of financial support, including a program to acquire extracurricular funds through endowment income, consultancy services, grants, provision of continuing education, and other fundraising mechanisms (Q 3.8.1)
- Secure a budget for innovation in education, research, and other scholarly activities (Q 3.8.2)
- Allocate an uncommitted reserve of finance/budget to address unexpected issues (Q 3.8.3)

4. ACADEMIC STAFF/FACULTY

4.1 STAFF RECRUITMENT, AND DEVELOPMENT AND RETENTION POLICY/GUIDELINE

Basic Standards

The medical school **must**”

- Ensure the existence of clearly stated, appropriate, and effectively implemented policy and procedure for recruitment and promotion of staff that outlines:
 - ◆ The type, responsibilities, and balance of the academic staff of the basic biomedical sciences, professional courses, and the behavioral and social sciences required to deliver the curriculum adequately. (B 4.1.1)
 - ◆ The balance between staff teaching major and supportive courses, full-time and part-time staff, and academic and non-academic staff (B 4.1.2)
 - ◆ Equitable distribution of duties and responsibilities among the academic staff (B 4.1.3)
 - ◆ Promotion of staff to offices and academic ranks (B 4.1.4)
 - ◆ Criteria for scientific, educational, and clinical merit, including the balance between teaching, research, and service qualifications. (B 4.1.5)
 - ◆ The specific responsibilities of its academic staff and mechanisms for monitoring them (B 4.1.6)
- Ensure the existence of mechanisms and procedures for professional development and career advancement of the academic staff such as advanced training, specialized courses, pedagogical training, etc. (B 4.1.7)
- Have mechanisms to identify the human resource needs of the Program and training needs of the staff (B 4.1.8)
- Have a system for orienting and mentoring of new academic staff (B 4.1.9)
- Ensure that each instructor has a technical update in the field of instruction in the past 2 years with a minimum of 30 continuing education units (CEUs)/year (B 4.1.10)
- Have an evaluation system for academic staff performance that:
 - ◆ Is carried out regularly using standardized formats that are regularly updated (B 4.1.11)
 - ◆ Is performed by academic staff themselves, students, peers, and the department head (B 4.1.12)
 - ◆ Is specific and enables timely provision of constructive feedback to instructors (B 4.1.13)
 - ◆ Has documented results to be used for decision-making and staff development (B 4.1.14)
 - ◆ Encompasses technical knowledge, communication skills, teamwork, and attitudes/behavior (B 4.1.15)

Quality Improvement Standards

The medical school **should**:

- Formulate and implement a performance-based incentive system (based on performance evaluation results) for the academic staff (Q 4.1.1)
- Develop and implement a staff retention policy (Q 4.1.2)
- In its policy for staff recruitment and selection, take into account criteria such as relationship to its mission, including significant local issues. (Q 4.1.3)

Annotation

Significant local issues would include gender, ethnicity, religion, language, and other items of relevance to the school and the curriculum.

4.2 TEACHING STAFF

Basic Standards

The medical school **must**:

- Implement a ratio of academic staff to students of 1:20 for classroom teaching (B 4.2.1)
- Ensure that the number of students assigned to skills labs and practical attachments is in line with specific professions requirement and local context (B 4.2.2)
- Have academic staff with the following qualifications:
 - ◆ Master's Degree or above to teach all major/professional courses and/or public health courses and specialization in surgery, internal medicine, obstetrics and gynecology, pediatrics, dermatology, radiology, ophthalmology, dentistry, and ear, nose and throat, psychiatry to teach clinical courses. In addition, he/she must also have at least 2 years' experience in the related field (B 4.2.3)
 - ◆ Master's Degree, or Bachelor's Degree with at least 2 years' working experience in related field for supportive and common courses (B 4.2.4)
 - ◆ First degree and above for all instructors in the following distribution (Doctor of Philosophy [PhD] 30%, Master's 50%, and first degree 20% or less) (B 4.2.5)
- Implement ratio of full time and part time teaching faculty of 3:2 (60% and 40% respectively) (B 4.2.6)
- Assign one academic staff member to coordinate practical/clinical programs that facilitate practical learning (B 4.2.7)
- Assign a skills lab coordinator who is a medical doctor (B 4.2.8)
- Ensure that each instructor has taken a course on teaching methodology that enables him/her to teach and assess medical students effectively (B 4.2.9)

Quality Improvement Standards

The medical school **should**:

- Implement a ratio of academic staff to students of 1:5 for practical teaching (Q 4.2.1)
- Ensure that all instructors (classroom, practical, and skills lab) have Master's Degrees and above qualification (Q 4.2.2)

- Ensure that instructors are involved in providing community services, preferably related to their specialty (Q 4.2.3)

Annotation

Qualifications of academic staff would mean appropriateness of the high-level trainings to the course being taught.

4.3 PRECEPTORS

Basic Standards

The medical school **must**:

- Have a written guideline/criteria for selection of preceptors who are working at practice sites and providing service (B 4.3.1)
- Ensure that the preceptors:
 - ◆ Are at least general practitioners with minimum of 2 years of service in the specific area (B 4.3.2)
 - ◆ Have a current license to practice medicine (B 4.3.3)
 - ◆ Maintain competency by completing relevant CPD courses (30 CEUs per year) (B 4.3.4)
 - ◆ Have formal training for clinical teaching (B 4.3.5)
- Ensure that the preceptor-to-student ratio for the practice experience is sufficient to provide individualized instruction, guidance, and supervision (B 4.3.6)

Quality Improvement Standards

The medical school **should**:

- Establish a mechanism to support preceptors' CPD as educators and practitioners in line with their responsibilities in the program (Q 4.3.1)
- Implement incentive and recognition mechanisms for the preceptors (Q 4.3.2)

Annotations

Preceptors refers to qualified clinicians who are working on a full-time basis in the respective experiential practice sites and have signed a formal agreement with the higher education institutions to coach the students.

Guideline for selection of preceptors should include criteria such as desire to teach; having adequate time, teaching skills, and excellent communication skills; and having a clearly documented role and responsibilities.

5. STUDENT ADMISSION AND SUPPORT

5.1 STUDENT ADMISSION AND SELECTION

Basic Standards

The medical school **must**:

- Have a written policy/guideline for student admission and selection that specifies:
 - ◆ Rationale, process of student selection, and minimum acceptance criteria/admission requirement according to the curriculum (B 5.1.1)
 - ◆ Course/credit exemption, course waiver (credits transfer), and substitution for non-generic students (B 5.1.2)
 - ◆ Existence of an entity responsible for student selection and admission that ensures transparency and fairness (B 5.1.3)
 - ◆ The process for transfer of students from other programs and institutions (B 5.1.4)
 - ◆ The process and criteria for selection of students with special needs and from underserved populations (B 5.1.5)
 - ◆ The size of student intake in relation to its capacity and resource at all stages of the program (B 5.1.6)
 - ◆ A system for appeal for admission decisions (B 5.1.7)
- Ensure that the admission policy/guideline is in line with the institutional and national requirements (B 5.1.8)
- Ensure that student selection and admission process is transparent, free from discrimination, and in accordance with institutional policies and all applicable codes of laws (B 5.1.9)
- Be represented on the screening and selection committee/entity of the institution (B 5.1.10)
- Publish and disseminate to its constituency the admission policy and mechanism (B 5.1.11)

Quality Improvement Standards

The medical school **should**:

- State the relationship between selection, the mission of the school, the educational program, and desired qualities of graduates (Q 5.1.1)
- Have a mechanism to assess the pre-entry knowledge, skill, and motivation of the applicants to be doctors, and use the result for selection of students (such as entrance exams and interviews, pre-exposure of the applicants to the actual professional practice, etc.) (Q 5.1.2)
- Have a system for student mobility, exchanges and transfers, internationally (Q 5.1.3)
- Periodically review the admission policy/guideline and student intake in line with academic success of the students and the needs of the society in consultation with other relevant stakeholders and regulate it to the health needs of the community and society. (Q 5.1.4)

Annotations

Admission policy would imply adherence to possible national regulation as well as adjustments to local circumstances. If the medical school does not control the admission policy, it would demonstrate responsibility by explaining relationships and drawing attention to consequences, e.g., imbalance between intake and teaching capacity.

Admission criteria should include interest, pre-requisite knowledge and skills, background education, physical fitness, national exam grade requirements, and criteria for upgrading student selection.

The health needs of the society would include consideration of intake according to gender, ethnicity, and other social requirements (socio-cultural and linguistic characteristics of the population), including the potential need for a special recruitment, admission, and induction policy for underprivileged students and minorities.

5.2 STUDENT SUPPORT SYSTEMS

Basic Standards

The medical school **must**:

- Ensure that medical students have access to the following services:
 - ◆ Counseling on academic, health, and social issues that could otherwise affect their success in the program (B 5.2.1)
 - ◆ Student support addressing academic (like remedial support, peer-assisted learning), social, and financial needs (B 5.2.2)
 - ◆ Access to basic 24/7 clinic services (B 5.2.3)
- Have a mechanism for students to appeal on matters related to student support services (B 5.2.4)
- Ensure that new students are effectively oriented about the program, academic rules and regulations, and the student support systems (B 5.2.5)
- Ensure support to extracurricular activities like student associations for sport, gender, and HIV (B 5.2.6)

Quality Improvement Standards

The medical school **should**:

- Provide career guidance and advice on progression after completing the program (Q 5.2.1)
- Have a system/mechanism to evaluate and ensure the adequacy, effectiveness, and safety of the available student support services (Q 5.2.2)
- Ensure that medical students have a student handbook that clearly indicates:
 - ◆ Student support systems and how to access them (Q 5.2.3)
 - ◆ Rights, responsibilities, and obligations of students in the school (Q 5.2.4)
 - ◆ School profile: brief history, organizational structure, etc. (Q 5.2.5)
- Support establishment of charity clubs (Q 5.2.6)

Annotations

Academic counseling would include questions related to choice of electives, clerkship trainings, postgraduate specializations, and career guidance. Organization of the counseling would include appointing academic mentors for individual students or small groups of students.

Addressing social, financial, and personal needs would mean support in relation to social and personal problems and events, health problems, and financial matters, and would include access to health clinics, immunization programs, and health/disability insurance as well as financial aid services in forms of bursaries, scholarships, and loans.

5.3 STUDENT REPRESENTATION

Basic Standard

The medical school **must**:

- Formulate and implement a policy that ensures participation of student representatives and appropriate participation in the design, management, and evaluation of the curriculum, and in other matters relevant to students (B 5.3.1)

Quality Improvement Standard

The medical school **should**:

- Encourage and facilitate student activities and student organizations (Q 5.3.1)

Annotations

Participation of student representatives would include student self-governance and representation on the curriculum committee, other educational committees' scientific and other relevant bodies, as well as social activities and local health care projects.

To *facilitate student activities* would include consideration of providing technical and financial support to student organizations.

6. PROGRAM RELEVANCE AND CURRICULUM

6.1 PROGRAM RELEVANCE

Basic Standards

The program **must**:

- Identify and address national health priorities, the needs of the society, the present and emerging role of the practitioner, and professional and legal requirements for practice (B 6.1.1)
- Be consistent with a basic scientific foundation (B 6.2.2)

Quality Improvement Standards

The medical school **should**:

- Conduct a need/market assessment, in consultation with key stakeholders and international trends, to ensure that it addresses the priority health care needs of the society (Q 6.1.1)
- Ensure that the program is consistent with international standards of the profession (Q 6.1.2)

6.2. CURRICULUM MODEL AND INSTRUCTIONAL METHODS

Basic Standards

The medical school **must**:

- Define the curriculum model that enables students to achieve graduate competencies (B 6.2.1)
- Clearly states the instructional and learning methods employed in the curriculum based on contemporary medical education principles (B.6.2.2)

Quality Improvement Standards

The medical school **should**:

- Organize the curriculum around sets of functions/competencies (competency-based) and oriented to professional practice based on the future occupational practice of graduates (Q 6.2.1)
- Periodically review the curriculum to address societal needs and international developments in medical practice (Q 6.2.2)
- Ensure that the curriculum has instructional methods that foster the ability of students to participate in scientific development and innovations (Q 6.2.3)

Annotations

Curriculum in this document refers to the educational program and includes a statement of the intended educational outcomes, the content/syllabus, and experiences and processes of the program, including a description of the structure of the planned instructional and learning methods and assessment methods. The curriculum should set out what KSA the student will achieve.

Curriculum models would include models based on disciplines, organ systems, clinical problems/tasks, or disease patterns as well as models based on modular or spiral design.

Instructional methods encompass lectures, small-group teaching, problem-based or case-based learning, peer-assisted learning, practical, laboratory exercises, bedside teaching, clinical demonstrations, clinical skills laboratory training, field exercises in the community, and web-based instruction.

Contemporary educational principles would mean principles that:

- Stimulate, prepare, and support students to take responsibility for their learning
- Are student-centered and promote self-learning
- Prepare students to be professionals as well as lifelong learners

6.3. SCIENTIFIC METHOD

Basic Standards

The medical school must, throughout the curriculum, teach:

- The principles of scientific method, including analytical and critical thinking (B 6.3.1)
- Medical research methods (B 6.3.2)
- Evidence-based medicine (B 6.3.3)

Quality Improvement Standard

- The medical school **should**, in the curriculum, include elements of original or advanced research and ensure that students engage in research (Q 6.3.1)

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.

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.

6.4 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 (B 6.4.1)
- Concepts and methods fundamental to acquiring and applying clinical science (B 6.4.2)

Quality Improvement Standards

The medical school **should**, in the curriculum, adjust and modify the contributions of the biomedical sciences to the:

- Scientific, technological, and clinical developments (Q 6.4.1)
- Current and anticipated needs of the society and the health care system (Q 6.4.2)

Annotation

The *basic biomedical sciences* would—depending on the country’s needs, interests, and traditions—include anatomy, histology, embryology, biochemistry, physiology, biophysics, cell biology, genetics, immunology, microbiology (including bacteriology, parasitology, and virology), molecular biology, pathology and pharmacology.

6.5 BEHAVIORAL AND SOCIAL SCIENCES AND MEDICAL ETHICS

Basic Standard

The medical school **must**, in the curriculum:

- Identify and incorporate the contributions of the behavioral sciences and social sciences and medical ethics that enable effective communication, program-specific decision-making, and ethical practices (B 6.5.1)

Quality Improvement 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 6.5.1)
- Current and anticipated needs of the society and the health care system (Q 6.5.2)
- Changing demographic and cultural contexts (Q 6.5.3)

Annotations

Behavioral and social sciences would depending on the country’s needs, interests, and traditions include biostatistics, community medicine, epidemiology, global health, hygiene, medical anthropology, medical psychology, medical sociology, public health-environmental health, health system management, health education, reproductive health, community-based training program, team training program, 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.

6.6. CLINICAL SCIENCES AND SKILLS

Basic Standards

The medical school **must**:

- Identify and incorporate clinical sciences in the curriculum to ensure that students acquire sufficient knowledge and clinical and professional skills to assume appropriate responsibility after graduation (B 6.6.1)

- Ensure that a reasonable part of the program is spent in practicing with patients in relevant clinical settings (B 6.6.2)
- Specify the amount of time spent in training in major clinical disciplines (B 6.6.3)

Quality Improvement Standards

The medical school **should**, in the curriculum:

- Adjust and modify the contributions of the clinical sciences to the:
 - ◆ Scientific, technological, and clinical developments (Q 6.6.1)
 - ◆ Current and anticipated needs of the society and the health care system (Q 6.6.2)
- Structure the different components of clinical skills training according to the stage of the study program and in a manner that ensures early exposure of students to practice (Q 6.6.4)

Annotations

The clinical sciences would—depending on the country’s needs, interests, and traditions—include anesthesia, dermatovenereology, diagnostic radiology, emergency medicine, general practice/family medicine, geriatrics, gynecology and obstetrics, internal medicine (with subspecialties), laboratory medicine, medical technology, neurology, neurosurgery, oncology and radiotherapy, ophthalmology, orthopedic surgery, Oto-Rhino-Laryngology, pediatrics, palliative care, physiotherapy, rehabilitation medicine, psychiatry, surgery (with subspecialties), and clinical sciences, which 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, teamwork/team leadership skills, and inter-professional collaboration. 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.

Major clinical disciplines would include internal medicine (with subspecialties), surgery (with subspecialties), gynecology and obstetrics, and pediatrics (with subspecialties).

6.7 CURRICULUM STRUCTURE, COMPOSITION, AND DURATION

Basic Standards

The medical school **must**:

- Describe the content, extent, sequencing duration of courses, and other curricular elements to ensure appropriate coordination between basic biomedical, behavioral, social, and clinical subjects (B 6.7.1)
- Clearly define the balance between theory and practice (at least one-third of the training time is dedicated to practical teaching) (B 6.7.2)
- Ensure that the total duration of training, credit hours per semester, and durations of practical attachments are clearly defined and consistent with the national standards (B 6.7.3)

Quality Improvement Standards

The medical school **should**, in the curriculum:

- Ensure horizontal integration of associated sciences, disciplines, and subjects (Q 6.7.1)
- Ensure vertical integration of the clinical sciences with the basic biomedical and the behavioral and social sciences (Q 6.7.2)
- Allow optional (elective) content and define the balance between the core and optional content as part of the educational program (Q 6.7.3)
- Define inter-professional educational opportunities (Q 6.7.4)
- Ensure early and longitudinal exposure of students to a variety of practice sites and community-based practices (Q 6.7.5)
- Describe the interface with complementary medicine (Q.6.7.6)

Annotations

Horizontal integration outlines the relationship between subjects taught at the same level of the program.

Vertical integration describes the process of taking information used at any one level and extending that through other levels of the program. It can also be used to articulate the relationship between fundamental, discipline-specific knowledge and professional practice.

Core and optional (elective) content refers to a curriculum model with a combination of compulsory elements and electives or special options.

Inter-professional educational opportunities refers to occasions when students from two or more health professions learn together during all or part of their professional training, with the object of cultivating collaborative practice for providing client- or patient-centered health care.

Complementary public health practice would include unorthodox, traditional, or alternative public health practices.

6.8 PROGRAM MANAGEMENT

Basic Standards

The medical school **must**:

- Have a functional curriculum committee under the education development center, which has the responsibility and authority for designing, implementing, and reviewing the curriculum to achieve its intended educational outcomes (B 6.8.1)
- In its curriculum committee, ensure representation of students and staff from all units/course teams of the school/department (B 6.8.2)
- Periodically review and update the curriculum at appropriate intervals and based on emerging evidence and the needs of the society, students' performance assessment results, and feedback from students and other stakeholders (B 6.8.3)
- Communicate and ensure that the curriculum is available to staff, students, and other stakeholders (B 6.8.4)

- Prepare and implement an academic calendar that indicates dates of registration, course add/drops, practical attachments, final exams, class ends, vacation, graduation, and other major events (B 6.8.5)
- Ensure that the average time for graduation is in line with the program standard (6.5 years, with the final year totally dedicated for internship) (B 6.8.6)

Quality Improvement Standards

The medical school **should:**

- Plan and implement innovations in the curriculum by its curriculum committee (Q 6.8.1)
- Ensure representation of other stakeholders on the curriculum committee (Q 6.8.2)

6.9 LINKAGE WITH MEDICAL PRACTICE AND THE HEALTH SECTOR

Basic Standard

The medical school **must:**

- Ensure operational linkage between the educational program and the subsequent stages of training or practice after graduation (B.6.9.1)

Quality Improvement Standards

The medical school **should:**

- Ensure that the curriculum committee seeks input from the environment in which graduates will be expected to work, and modify the program accordingly (Q 6.9.1)
- Consider program modification in response to opinions in the community and society (Q 6.9.2)

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 program 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 a basis for career guidance.

Subsequent stages of training would include postgraduate training and continuing professional development (CPD).

7. TEACHING, LEARNING, AND ASSESSMENT

7.1 TEACHING-LEARNING

Basic Standards

The medical school **must**:

- Use contemporary teaching principles that stimulate, prepare, and support students to take responsibility for their learning including active learning methods, a student-centered approach, demonstration, and facilitative practice in the classroom, skills lab, clinical, and community practice setting (B 7.1.1)
- Ensure that instructors devote much of the time to work with students individually or in small groups to guide learners, facilitate learning, evaluate each student's performance, and provide timely feedback (B 7.1.2)
- Ensure that instructors effectively plan and prepare for teaching (B 7.1.3)
- Ensure that instructors use appropriate and relevant educational materials including national service delivery guidelines (B 7.1.4)
- Ensure the acquisition of KSA for core competencies (B 7.1.5)
- Ensure that each course/module instructor provides a standardized syllabus for the course on the first day class and thoroughly discusses it with the students (B 7.1.6)
- Ensure that instructors prepare and use a session plan that contains session objectives, an outline of key points, questions, and other group activities, with needed materials for the students (B 7.1.7)
- Ensure that instructors identify and inform students about resources for in-depth reading on the session (B 7.1.8)
- Ensure that educational materials used during classroom and practical teaching are/have:
 - ◆ Content that agrees with the learning outcomes (content must be mapped with the learning outcomes) (B 7.1.9)
 - ◆ Up-to-date, factual, and technically correct (B 7.1.10)
 - ◆ Regularly revised (B 7.1.11)
- Ensure that instructors announce and use consultation hours to work with students individually or in small groups and support student learning (B 7.1.12)
- Prepare and implement a schedule for clinical practice/practical attachments (B 7.1.13)
- Have a mechanism to monitor and evaluate the teaching-learning process by instructors, preceptors, and students and use the results/feedback to improve learning (B 7.1.14)

Quality Improvement Standards

The medical school **should**:

- Clearly define in the curriculum and demonstrate use of the following learning methods:
 - ◆ Peer-assisted learning (Q 7.1.1)
 - ◆ Problem/case-based learning (Q 7.1.2)
 - ◆ Reflective learning using portfolio (Q 7.1.3)
 - ◆ Web-based instruction (Q 7.1.4)

- ◆ Field exercises in the community (community-based activities) (Q 7.1.5)
- Offer students the opportunity for an early immersion and longitudinal exposure to clinical/practical experience and community-based learning throughout the curriculum under supervision of senior professionals (Q 7.1.6)

Annotations

Standardized syllabus is a document that contains all the basic information about the course. It should contain the course name and description, objectives, course logistics, teaching and assessment methods, course schedule that indicates the learning activities of each week/date, exam and assignment due dates, reading materials, course policy, grading system, and name and contact address of the course instructor.

Educational materials include handouts, textbooks, reference books, electronic learning media, and learning tools (SOPS, checklists, charts).

Schedule for clinical practice would mean a program that clearly indicates *duration* of attachment, names of students at each site, names of supervisors and preceptors for each group, rotation system, case presentation dates, and schedule of major activities. It should be prepared in consultation with the practice sites and communicated to supervisors, preceptors, and students before deployment.

Peer-assisted learning can be defined as the acquisition of knowledge and skill through active help and support among individuals of equal status or matched companions.

Problem/case-based learning is a teaching strategy in which students use “triggers” from the problem case or scenario to define their own learning objectives. Subsequently, they do independent, self-directed study before returning to the group to discuss and refine their acquired knowledge.

Reflective portfolio is defined as the collection of evidence that attests to achievement as well as personal and professional development through a critical analysis and reflection of its contents.

***Web-based instruction* is anywhere, anytime instruction delivered over the Internet or a corporate intranet to browser-equipped learners.**

7.2 ASSESSMENT

Basic Standards

The medical school **must**:

- Have assessment policies/guideline that clearly define:
 - ◆ A range of assessment methods used for formative and summative evaluation (B 7.2.1)
 - ◆ The frequency and timing of exams (B 7.2.2)
 - ◆ Criteria for setting pass marks (B 7.2.3)
 - ◆ Grading, promotion, repetition, dismissal and re-admission, and number of allowed retakes (B 7.2.4)
 - ◆ A system for appeal for assessment results (B 7.2.5)

- ◆ The quality assurance process for assessment practices (B 7.2.6)
- Use a variety of methods for both knowledge and performance assessment:
 - ◆ At least two of the following methods are used for knowledge assessment: oral exam, written exams (multiple-choice questions, essay, short answer), assignments, project works, case presentations, and seminars (B 7.2.7)
 - ◆ At least one of the following methods is used for performance assessment: structured observation, review of the portfolio, and evaluation of tasks performed by students (B 7.2.8)
- Administer both formative and summative assessment on a continuous basis and make sure that:
 - ◆ The final exam of each course is comprehensive and accounts for not more than 40% of the total mark and the remaining is based on continuous assessment (B 7.2.9)
 - ◆ Each instructor provides timely, specific, constructive, and positive feedback to students on the basis of assessment results (B 7.2.10)
 - ◆ A mechanism is in place to provide special support to students with poor performance based on assessment results (B 7.3.11)
- Ensure confidentiality and security of student assessment processes and assessment results/academic records (B.7.2.12)
- Ensure autonomy of the school and its academic staff in the management of student assessment (B 7.2.13)

Quality Improvement Standards

The medical school **must**:

- Have an exam committee that ensures the validity and reliability of student assessment by:
 - ◆ Ensuring that each method of assessment and exam questions are prepared as per the standard (Q 7.2.1)
 - ◆ Supporting the staff to prepare a blueprint for each course to ensure that assessment methods match the learning outcomes and cover all portions of the course (Q 7.2.2)
- Support the staff to conduct item analysis and use the result for decision-making (Q 7.2.3)
- Establish and run a functional exam bank (Q 7.2.4)
- Use the following methods for performance assessment:
 - ◆ Objectively structured clinical/practical exam (Q 7.2.5)
 - ◆ 360-degree evaluation (Q 7.2.6)
- Ensure that the majority (>50%) of written assessment items/questions test higher-order cognitive domains (application, critical-thinking, decision-making, and problem-solving abilities of students) (Q 7.2.7)
- Adjust the number and nature of examinations of curricular elements to encourage both acquisition of the knowledge base and integrated learning (Q 7.3.8)
- Administer a comprehensive qualifying exam before students are deployed for internship/clerkship to prepare them for the national licensure examination (Q 7.2.9)

Annotations

Formative and summative assessment: formative assessment is assessment used to improve student learning and performance by giving feedback, while summative assessment is used to decide if the student has to move to the next stage of learning. Both should be conducted on a continual basis.

Higher-order cognitive domains include application, synthesis, and evaluation.

Portfolio is a collection of papers and other forms of evidence that learning has taken place. It provides evidence for learning and progress toward learning objectives. Reflecting upon what has been learned is an important part of constructing a portfolio.

Validity is the ability of an assessment to measure what it is supposed to measure. Validity is not about the method but refers to the evidence presented to support or refute the meaning or interpretation assigned to assessment results.

Reliability is the reproducibility or consistency or generalizability of assessment scores. An assessment result is said to be reliable if students will get the same score if they re-take the exam.

Blueprint is a clear, written recipe for an exam that ensures all content (KSA) is covered fairly and the test is a balanced sample of all the learning objectives that students have to master.

Item analysis refers to a statistical technique that helps instructors identify the effectiveness of their test items. In the development of quality assessment and specifically effective multiple-choice test items, item analysis plays an important role in contributing to the fairness of the test along with identifying content areas that maybe problematic for students.

Objectively structured practical exam is a performance-based exam. During the exam, students are observed and evaluated as they go through a series of eight or more stations. It allows assessment of multiple competencies. It is **objective**, because examiners use a checklist for evaluating the trainees; **structured**, because every student sees the same problem and performs the same tasks in the same time frame; and **practical**, because the tasks are representative of those faced in real practical situations.

360-degree evaluation consists of measurement tools completed by multiple people in a student's sphere of influence. Evaluators usually are faculty, other members of the health care team, peers, patients, families, and community members. It can be used to assess interpersonal and communication skills, teamwork ability, management skills, decision-making professional behaviors, and some aspects of patient care.

Encouragement of integrated learning would include consideration of using integrated assessment, while ensuring reasonable tests of knowledge of individual disciplines or subject areas.

8. STUDENT PROGRESSION AND GRADUATE OUTCOMES

Basic Standards

The medical school **must**:

- Have a mechanism to monitor student performance and progress regularly (B 8.0.1)
- Trace level of and reasons for student attrition and take actions to minimize the attrition (B 8.0.2)
- Ensure that the final qualifications achieved by the graduates are in line with the formulated and expected learning outcomes of the program (B 8.0.3)

Quality Improvement Standards

The medical school **should**:

- Have a system to link the program and potential employers and facilitate graduate employment (Q 8.0.1)
- Have a mechanism to trace employability, performance at the workplace, and satisfaction of its graduates/employers, and use the findings to influence the curriculum (Q 8.0.2)
- Implement strategies and programs to broaden the professional horizons of students and enhance their performance in areas such as scientific inquiry, scholarly concern for the profession, and the relevance and value of research through:
 - ◆ Inviting guest lecturers (Q 8.0.3)
 - ◆ Participating in curricular and extracurricular activities (Q 8.0.4)
 - ◆ Arranging panel discussions with senior experts in different areas of medical practice (Q 8.0.5)
 - ◆ Supporting students and academic staff to participate in national and international scientific conferences (Q 8.0.6)
 - ◆ Organizing white coat ceremonies that welcome students into the profession of medicine (Q 8.0.7)

9. CONTINUAL QUALITY ASSURANCE

Basic Standards

The medical school **must**, as a dynamic and socially accountable institution:

- Have a functional internal quality assurance unit leading the quality assurance system with clearly defined duties/responsibilities and lines of communication (B 9.0.1)
- Allocate a budget to the quality assurance unit to carry out its responsibilities (B 9.0.2)
- Assign a qualified person to lead the unit (minimum of 2 years of teaching experience, training in educational quality assurance, training in teaching, and assessment of health care providers) (B 9.0.3)
- Conduct quality assessment using the internal quality standard tool (at least annually), and develop and implement clear strategies/work plans to fill the gaps identified (B 9.0.4)
- Have a system for regular curriculum evaluation and review (at least every 5 years) (B 9.0.5)
- Seek external quality audit and verification by HERQA or peer institutions and work on the recommendations given to ensure continual quality (B 9.0.5)

Quality Improvement Standards

The medical school **should**:

- Have a well-organized, functional, and vibrant internal quality assurance unit that is responsible for monitoring and evaluation of input, process, output, and impact of the educational program (Q 9.0.1)
- Systematically seek, analyze, and respond to teacher and student feedback (Collect student and instructor comments using a structured questionnaire or suggestion book, and take corrective action and document) (Q 9.0.2)
- Conduct external verification by peer institutions/schools every 2 years. (Q 9.0.3)
- Conduct review meetings with representatives from practice sites, industries, and professional bodies annually to evaluate the effectiveness of learning experiences (Q 9.0.4)
- Develop the structure, governance, and management of the organization to cope with changing circumstances and needs and, over time, accommodate the interests of the different groups of stakeholders (Q 9.0.5)

10. RESEARCH AND DEVELOPMENT AND EDUCATIONAL EXCHANGES

Basic Standards

The medical school **must**:

- Formulate and implement a staff development policy that allows a balance of capacity between teaching, research, and service functions (B 10.0.1)
- Have a clearly set research agenda for academic staff as well as students in line with the country's priority health care and developmental needs (B 10.0.2)
- Allocate a sufficient budget to support research and staff exchange (B 10.0.3)
- Ensure that each academic staff member as a part of a research team undertakes research and publishes one article in national/international journals at least every 2 years (B 10.0.4)
- Ensure that the research findings of the school are used to improve learning, community services, and program and professional development (B 10.0.5)
- Allocate a budget for students' research/directed studies (for transportation, data collection, chemical/reagent purchase, and stationery) (B 10.0.6)

Quality Improvement standards

The medical school **should**:

- Have thematic research areas in line with the country's priority health care and developmental needs (Q 10.0.1)
- Ensure that each academic staff as a member of a research team undertakes research and publishes at least one article in a reputable journal every year (Q 10.0.2)
- Formulate and implement a policy for national and international collaboration with other educational institutions, industries, and research centers (Q 10.0.3)
- Facilitate regional and international exchange of staff and students by providing appropriate resources, and ensure that the exchange is purposefully organized, taking into account the needs of staff and students (Q 10.0.4)
- Support active participation of staff in relevant professional conferences, seminars, workshops, and other academic activities at national and international levels so as to improve education and research (Q 10.0.5)

ANNEX I. ANATOMIC MODELS, MANNEQUINS, AND OTHER MEDICAL EQUIPMENT

S. No	List of Models, Mannequins, and Other Medical Equipment	Unit	Quantity
1.	Adult, pediatric, and neonatal BLS mannequins		
2.	Adult, pediatric, and neonatal ALS mannequins with different built-in scenarios		
3.	IM and IV injection trainer		
4.	Suture practice trainer		
5.	Trauma man		
6.	Wound care trainer		
7.	Joint aspiration trainer		
8.	Pericardiocentesis trainer		
9.	Adult, pediatric, and neonatal endotracheal tube insertion trainer		
10.	Thoracentesis trainer		
11.	Chest tube insertion trainer		
12.	Tracheostomy trainer		
13.	Cricothyrotomy trainer		
14.	Lumbar puncture trainer		
15.	Enema trainer		
16.	Nasogastric (NG) tube insertion trainer		
17.	Paracentesis trainer		
18.	Pelvic examination trainer (including cervical trainer)		
19.	Obstetric phantom with doll		
20.	Birth simulator		
21.	Episiotomy suturing simulator		
22.	Postpartum hemorrhage simulator		
23.	Manual vacuum aspiration (MVA) simulator		
24.	Catheterization trainer (with cystostomy)		
25.	Ultrasound trainer		
26.	Ear diagnostics trainer		
27.	Eye retinopathy trainer		
28.	Breast trainer		
29.	Cardiac sound trainer		
30.	Rectal (prostate) examination trainer		
31.	Respiratory sound trainer		
32.	Prostate examination trainer		
33.	Pregnancy/maternity simulator		
34.	BP apparatus (mercury and aneroid)		
35.	Stethoscope (adult and pediatric)		
36.	Fetoscope		
37.	Thermometer		
38.	Weighing scale and height measurement		

S. No	List of Models, Mannequins, and Other Medical Equipment	Unit	Quantity
39.	Pulse oximetry		
40.	Otoscope		
41.	Ophthalmoscope		
42.	Nasal speculum		
43.	Tuning fork		
44.	Pen light		
45.	Indirect laryngoscope		
46.	Hammer		
47.	Tap meter		
48.	Examination bed/couch		
49.	Stretcher		
50.	Waste bin		
51.	Gloves (disposable and sterile)		
52.	K-Y jelly		
53.	Spatula		
54.	Short-acting dilators		
55.	Battery		
56.	Pin		
57.	Cotton		
58.	Hand sanitizers/antiseptics		
59.	Electrocardiography (ECG) machine		
60.	Oxygen concentrator		
61.	Nasal catheter		
62.	Ambu bag		
63.	Oxygen mask		
64.	Endotracheal tubes		
65.	Laryngoscope		
66.	Oxygen mask		
67.	Pulse oxymeter		
68.	Defibrillator		
69.	Suction machine, suction tube		
70.	Minor surgical set		
71.	Dressing set		
72.	Delivery set		
73.	MVA set		
74.	Vacuum aspirator		
75.	Obstetrics forceps		
76.	Venous cut-down set		
77.	Lumbar puncture set		
78.	Pericardiocentesis set		
79.	Paracentesis set		
80.	Thoracentesis sets		

S. No	List of Models, Mannequins, and Other Medical Equipment	Unit	Quantity
81.	Chest tube, chest tube draining bottle		
82.	Tracheostomy tube		
83.	Enema cans, rectal tube, water boiler		
84.	Furniture		
85.	Stretcher		
86.	Patient bed		
87.	Examination couch		
88.	Examination light		
89.	Urinals, bedpans, wheelchair, walking canes, walker, crutches, pelvic meter, demonstration tables, bedside table, over-the-bed tables, chairs, water pitcher, cribs, IV poles		
90.	Foley catheter		
91.	Straight catheter		
92.	NG tube (adult and pediatric)		
93.	IV cannula adult		
94.	IV cannula pediatrics		
95.	IV fluids		
96.	Disposable syringes		
97.	Distilled water for injection		
98.	Garbage pails		
99.	Suture with needle (non-absorbable)		
100.	Suture with needle (absorbable)		
101.	Curtain screens for beds		
102.	Plastic aprons		

ANNEX II. TEXTBOOKS AND REFERENCES

S. No	Textbook Title	Author	Publication Year/Edition
	100 Case Studies in Pathophysiology	H. Bruyere	2009
	2010 Current Medical Diagnosis & Treatment	J. Stephen	2010
	Advanced Nursing Research	Ru Tappen	2011
	Anatomy: A Regional Atlas of the Human anatomy	Clement	2006
	Anatomy and Physiology the Unity of Form and Function	Saladink	2010, 5 th Edition
	Approach to Surgical Emergency	Shrivast	2010
	Atlas of Hematology	Anderson	2003
	Atlas of Human Anatomy	S. Inderbir	
	Bailey and Loves Short Practice of Surgery	J. Williams	2008, 25 th Edition
	Basic and Clinical Immunology	I. Peakman	2009, 2 nd Edition
	Basic Clinical Pharmacokinetics	M. Winter	2010, 5 th Edition
	Bates Pocket Guide to Physical Examination and History Taking	L. Bickley	2009, 6 th Edition
	Bedside Medicine	S.N. Chugh	2006
	Biochemistry Illustrated, Biochemistry and Molecular	N.C. Peter	2005, 5 th Edition
	Cecil Essentials of Medicine	Reoli	2004, 6 th Edition
	Clinical Medicine	Parveenk	2005
	Clinical Chemistry: Techniques, Principles, Correlations	Bishop ML	2010, 6 th Edition
	Clinical biochemistry	Marshal	2009
	Clinical Examination	P. Epstein	2009, 4 th Edition
	Clinical Laboratory Science Review	R. Harr	2000
	Clinical Mycology	D. So Jack	2003
	Clinical Obstetrics and Gynecology	Magowa	2009
	Clinical Oriented Anatomy	Rayapati	2010
	Clinical Pharmacokinetics and Pharmacodynamics Concepts and Applications	Rowland	2010, 4 th Edition
	Clinical Pharmacology	Ji Beettm	2009, 10 th Edition
	Clinical Pharmacy and Therapeutics	W. Walker	2008
	Color atlas of Anatomy: A Photographic Study of the Human Body	Johannes	2006
	Color Atlas of Histology	I. Gartner	2009, 5 th Edition
	Concise Medical Physiology		
	Current Procedures Surgery	Re Minter	2010
	Current Surgical Diagnosis and Treatment	Doherty	2006, 12 th Edition
	Danforth's Obstetrics and Gynecology	Kar Gibbs	2008, 10 th Edition
	Davidson's Principles & Practice of	Colledge NR et al.	2010, 21 st Edition

S. No	Textbook Title	Author	Publication Year/Edition
	Medicine		
	Essential Obstetrics and Gynaecology	E. Malcolm	2006
	Essential Reading in Infectious Disease Epidemiology	M. Magnus	2009
	Essentials of Clinical Medicine	Kathale	2006
	Essentials of Gynecology	Pratapku	
	Dorfar & Arneils Textbook of Pediatrics	McIntosh	2008, 7 th Edition
	Gray's Anatomy	Grayhen	2007
	Great Ormond Street Color Handbook of Paediatrics and Child Health	Strobel	2007
	Gynaecology for Postgraduates and Practitioners	Sengupta	2007
	Haematology Clinical Cases Uncovered	F. McCann	2009
	Harrisons Principles of International Medicine Volumes 1 and 2	Longo Da	2012, 18 th Edition
	Howkins & Bourne Shaw's Textbook of Gynaecology	Padubidri	2008
	Human Anatomy Regional and Applied (Dissection and Clinical)	B.D. Chaurasia	2007, 4 th Edition, Vol. 1
	Human Anatomy: Regional & Applied (Dissection & Clinical)	B.D. Chaurasia	2007, 4 th Edition, Vol. 2
	Human Physiology	Iras Fox	2009, 1 st Edition
	Human Physiology from Cells to Systems	Sherwood	2007, 6 th Edition
	Hutchison's Clinical Methods: An Integrated Approach to Clinical Practice	Michael Glynn and William M. Drake	2012
	Illustrated Clinical Anatomy	Abraham	2005
	Illustrated Medical Biochemistry	Raju and Ma	2006
	Illustrated Textbook of Paediatrics	Tom Liss	2006, 2 nd Edition
	Immunology	Tha Doan	2008
	Immunology: A Short Course	Coico	2008, 6 th Edition
	Immunology: an Introduction	la Tizard	1995, 4 th Edition
	Introduction to Surgical Instruments & Procedures	Kupur	2004
	Introduction to Community Health	Mckenzie	2012, 7 th Edition
	Introduction to Immunology	J. Decker	2000, 11 th Edition
	Kaplan and Sadock's Pocket Handbook of Clinical Psychiatry	B. Sadock	2010, 5 th Edition
	Kaplan and Sadock's Pocket Psychiatry Behavioral Sciences: Clinical Psychiatry	B. Sadock	2010, 10 th Edition
	Laboratory Experiments in Microbiology	Johnson	2010, 9 th Edition
	Last's Anatomy: Regional and Applied	C. Sinnatamby	2006, 11 th Edition
	Maders Understanding Human Anatomy and Physiology	Sylvia S. Mader	2004, 4 th Edition
	Maders Understanding Human Anatomy & Physiology	Susannah Longenbaker	2010, 7 th Edition

S. No	Textbook Title	Author	Publication Year/Edition
	Medical Microbiology	D. Greenwood	2009, 17 th Edition
	Medical Physiology	Kibble	2009
	Microbiology and Immunology	A. Johnson	2010, 5 th Edition
	Microbiology & Immunology	Chen & Ka	2007
	Microbiology and Immunology	B. Buxton	2010
	Microbiology for the Health Science	Burton	2007
	Molecular Medical Parasitology	J. Marr	2004
	Obstetrics and Gynecology (with CD)	Beckman	2006
	Pathophysiology of Disease: An Introduction to Clinical Medicine	Stephen	6 th Edition
	Pathophysiology: Concepts of Altered Health States	Porth	2009, 8 th Edition
	Pediatric First Aid for Caregivers and Teachers	Jones	2007
	Pediatric Physical Examination and Health Assessment	Sawyers	2012
	Pharmacology: An Introduction	Nagle and Hinter	2012, 6 th Edition
	Pharmaceutical Analysis	Parimooop	2010
	Pharmacology	Rang and Dale	2007, 6 th Edition
	Pharmacy Practice	Balling	2008, 3 rd Edition
	Principles of Anatomy & Physiology	Philip Tate	2009
	Principles of Anatomy & Physiology 2 vol. set (+free copy)	Tortora	2009, 12 th Edition
	Principles of Human Physiology	Laura Lee	2007
	Robbins Basic Pathology	Kumar, Abbas, Fausto, Mitchell	2007, 8 th Edition
	Rubin's Pathology Clinicopathologic Foundations of Medicine	Rubin	2008
	Schwartz's Principles of Surgery	Schwartz	2011
	Shaw's Textbook of Surgery	Hudson	2001
	Surgical Procedures and Anesthetic Implications	Macksey	2012
	TeLinde's Operative Gynecology	J. Rock	2010, 10 th Edition
	Techniques of Manual Small Incision Cataract Surgery	Anita Pan	2010
	Textbook of Medical Laboratory Technology	Sood Ram	2006
	Textbook of Microbiology	DR Arora	2008
	Textbook of Obstetrics	Konar Hi	2004
	Textbook of Pathology	Mo Harsh	2005, 5 th Edition
	Textbook of Pediatric Infectious Diseases, Vols. 1 and 2	Feigin and Cherry	2009, 6 th Edition
	Tietz Fundamentals of Clinical Chemistry	Burtis	2008, 5 th Edition
	Tietz Textbook of Clinical Chemistry and Molecular Diagnosis	Burtis	2005, 4 th Edition
	Trease and Evans Pharmacognosy	William Evans	2009, 16 th Edition

S. No	Textbook Title	Author	Publication Year/Edition
	Virology	Maharaj	2011
	Women`s Gynecologic Health	Schuilng	2013, 2 nd Edition
	Current Diagnosis and Treatment Obstetrics and Gynecology	Alan Decherney	2007, 10 th Edition
	William`s Obstetrics	F. Cunningham	2005, 22 nd Edition
	Obstetrics: Normal and Problem Pregnancies	Gabbe et al.	2007
	Neonatology: Management, Procedures, On-Call Problems, Diseases, and Drugs	Gomella, Tricia Lacy, Cunningham, Douglas, Fabien	2009
	Essential Gynecology and Obstetrics	E. Malcolm Symonds	2004, 4 th Edition

ANNEX III. NATIONAL SERVICE DELIVERY GUIDELINES

S.no	Title	Unit	Number
1.	National HIV-related guidelines		
2.	TB-related guidelines		
3.	National malaria-related guidelines		
4.	National nutrition-related guidelines		
5.	National infection prevention-related guidelines		
6.	National health sector development plan-related guidelines		
7.	National integrated management of neonatal and childhood illness (IMNCI)-related guidelines		
8.	National drug formulary-related guidelines		
9.	National sexually transmitted infection (STI)-related guidelines		

ANNEX IV. INDICATIVE SOURCES OF EVIDENCE FOR VERIFICATION OF STANDARDS

Indicative sources of evidence for verification of the standards for Area 1: Program goals and outcomes

- Employer survey
- Curriculum
- Academic brochures and prospectus or bulletin
- Documentation on stakeholders' input (proceedings)
- Institution's website
- Matrix of mission and vision of the HEI program goals
- Matrix of programs aims and educational outcomes
- Interviews with stakeholders, senior management, academic staff, and students
- Matrix of educational outcomes with the national scope of practice for medical professionals

Indicative sources of evidence for verification of the standards for Area 2: Governance, leadership, and administration

- School/institute legislation and personnel policy
- Staff recruitment, promotion, development and appraisal policies, procedures/criteria
- Staff job description and workload document
- Memorandum of Understanding signed with stakeholders
- Minutes of meetings at school, departmental/unit, and different standing committee levels
- Interviews with management staff, school leaders, department/unit heads, administrative/academic staff, and student representatives
- Staff statistics

Indicative sources of evidence for verification of the standards for Area 3: Educational resources

- Document on asset inventory
- Interviews with school leader, librarian, department heads, academic staff, coordinator of experiential program, students, and administration staff
- Observation/survey of offices, classrooms, computer lab, skills lab, library, storage for skills lab materials, conference rooms, practice site, and other facilities indicated in the standard
- Document indicating facility cleaning and maintenance schedule
- Memorandum of Understanding signed with practicum sites
- Proceedings of review meetings conducted with clinical practice sites
- Documents indicating strategic plan, operational work plan, and budget plan

Indicative sources of evidence for verification of the standards for Area 4: Academic staff, support staff, and preceptors

- Legislation, policy, and guidelines
- Staff recruitment, promotion, development, and appraisal procedure/criteria
- Documents on staff job descriptions and workload
- Documented evidence on academic staff engagement in teaching, research, and community services
- Documents on academic staff members' and preceptors' evaluation results and feedback
- Minutes of meetings at departmental, school, and standing/ad-hoc committee level
- Interviews with senior management, deans, department heads, coordinator of the experiential training, academic staff, and student representatives
- Guidelines and tools for experiential training/placement evaluation
- Staff statistics
- Student enrollment data
- Lecture timetable
- Filled-in staff appraisal form

Indicative sources of evidence for verification of the standards for Area 5: Student admission and support services

- Student handbooks
- Documents on student counseling; career guidance; etc.
- Student enrollment statistics
- Student admission policy/guideline
- Policies on student transfer, credit transfer, course exemption, and waiver
- Interviews with senior management, dean of students, student council, students, and academic and administration staff
- School website
- Infrastructure for student support services (clinic, sport, and lounge, etc.)
- Documentation on announcements about admission
- Documentation on appeal mechanism
- Documentation on orientation program
- Documentation on tutorial and supportive courses

Indicative sources of evidence for verification of the standards for Area 6: Program relevance and curriculum

- Curriculum development guideline/procedures
- Minutes of meetings of committees dealing with curriculum development, approval, monitoring, and review at department, school/institute level
- Curriculum review reports

- Course catalogues (showing the structure and aims of each program, course aims, descriptions, indicative activities, and book lists)
- Interviews with senior management, school leader, department heads, academic staff, students, graduates, and employers

Indicative sources of evidence for verification of the standards for Area 7: Teaching-learning and assessment

- Curriculum
- Syllabus for major and supportive courses
- Handouts of major and supportive courses
- Schedule for clinical practice
- Guideline for experiential training
- Consultation hours posted on offices
- Exam papers of major and supportive courses
- Checklist for skill teaching and assessment
- Legislation of the HEI/school
- Examination and assessment guideline
- Report of external examiners
- Academic calendar
- Examination committee reports and minutes
- Reports of reviews of teaching, learning, and assessment
- Observation of classroom sessions, practice sessions, and skills lab sessions
- Interviews with school leader, department heads, coordinator of experiential program, students, academic staff, and preceptors

Indicative sources of evidence for verification of the standards for Area 8: Student progression and graduate outcomes

- Registrar's office reports
- Data on student attrition and graduation rates
- Reports on graduate tracer studies
- Reports on employer satisfaction studies
- Employer feed-back reports Lists of employer contacts
- Records on students' years of stay in the school (enrollment to graduation)
- Records on engagement of students in scholarly and extracurricular activities
- Formal documents on educational and scholarship linkages, students' extracurricular activities, etc.
- Interviews with senior management, registrar, coordinator of experiential training, academic staff, students, graduates, employers, etc.

Indicative sources of evidence for verification of the standards for Area 9: Continual quality assurance

- Internal Quality Audit manual for pharmacy program
- IQA guideline
- Assessment results and intervention strategy documents on IQA
- Minutes of meetings of IQA unit
- Reports on curriculum review/appraisal
- Legislation of the HEI/school
- Interviews with school leader, department heads, academic staff, coordinator of experiential program, students, and preceptors

Indicative sources of evidence for verification of the standards for Area 10: Research, development, and educational exchanges

- Policy documents on budget and facility allocation for academic staff/student research
- Document on identified priority research areas of the school/institute and the country
- Policy on research and obligatory publication in reputable national/international journals for each academic staff for existence, appraisal and promotion
- Research finding reports of academic staff/students and research findings dissemination documents

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2. Generic Performance Standards for Pre-Service Education in Health, February 2012, Jhpiego-Ethiopia.
3. Basic Medical Education WFME Global Standards for Quality Improvement. The 2012 Revision, World Federation of Medical Education Office. University of Copenhagen, Denmark, 2012.
4. Scope of Practice for Health Professionals in Ethiopia, Food, Medicine and Health Care Administration and Control Authorities, 2013.
5. A Hybrid Innovative Medical Curriculum, Debretabor University, 2013.

