



USAID
FROM THE AMERICAN PEOPLE

**HUMAN
RESOURCES
FOR HEALTH**

Higher Education Relevance and Quality Agency

National Accreditation and Quality Improvement Standards for Public Health Officers Program

First Edition
July 2014

HERQA Publication Series - 081



USAID
FROM THE AMERICAN PEOPLE

**HUMAN
RESOURCES
FOR HEALTH**

Higher Education Relevance and Quality Agency

National Accreditation and Quality Improvement Standards for Public Health Officers Program

First Edition
July 2014

PREPARED BY

Dereje Ayele, Public Health Officer Association
Bekalu Tesfa, Public Health Officer Association
Helen Tesfayohannes, Public Health Officer Association
Nurahan Tewfik, Federal Ministry of Health
Akilew Awoke, University of Gondar
Yodit Kidanemariam, Strengthening Human Resources for Health Project, Jhpiego
Assefa Bulcha, Strengthening Human Resources for Health Project, Jhpiego
Tesfaye Teshome, HERQA
Kassahun Kebede, HERQA
Yeromnesh Ayele, HERQA
Mulugeta Mekonnen, HERQA
Yemisrach Adamu, HERQA
Mihereteab Teshome, Strengthening Human Resources for Health Project, Jhpiego
Daniel Dejene, Strengthening Human Resources for Health Project, Jhpiego
Zerihun Wolde, Strengthening Human Resources for Health Project, Jhpiego
Tegbar Yigzaw, Strengthening Human Resources for Health Project, Jhpiego
Equlinet Misganaw, Strengthening Human Resources for Health Project, Jhpiego
Samuel Mengistu, Strengthening Human Resources for Health Project, Jhpiego
Hone Belete, Strengthening Human Resources for Health Project, Jhpiego
Sharon Kibwana, Strengthening Human Resources for Health Project, Jhpiego
Bekalu Asaminew, Strengthening Human Resources for Health Project, Jhpiego
Mintwab Gelagay, Strengthening Human Resources for Health Project, Jhpiego
Yohannes Molla, Strengthening Human Resources for Health Project, Jhpiego
Catherine Carr, Jhpiego
Julia Bluestone, Jhpiego

ACKNOWLEDGMENT

This National Accreditation and Quality Improvement Standard for the Ethiopian Public Health Officer Degree Program was developed by The Higher Education Relevance and Quality Agency (HERQA) in collaboration with the Federal Ministry of Health (FMOH), and the Strengthening Human Resources for Health Project. This document is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the Cooperative Agreement AID-663-A-12-00008. The contents are the responsibility of HERQA and do not necessarily reflect the views of USAID or the United States Government.

TABLE OF CONTENTS

Introduction	1
1. Program Goals and Learning Outcomes	4
1.1 Program Goals/Aims.....	4
1.2 Participation in the Formulation of the Program Goals and Outcomes.....	5
1.3 Institutional Autonomy and Academic Freedom.....	5
1.4 Educational Outcomes/Graduate Profiles/Core Competencies of the Program.....	6
2. Governance, Leadership, and Administration	7
2.1 Governance of the Program.....	7
2.2 Academic Leadership of the Program	7
2.3 Administrative Staff and Management	8
2.4 Educational Budget and Resource Allocation.....	8
2.5 Interaction with the Health Sector	9
3. Educational Resources	10
3.1 Lecture Halls/Classrooms	10
3.2 Office for Staff.....	11
3.3 Skills Development Center/Laboratory	11
3.4 Practical Training Facilities/Clinical Practice Sites	12
3.5 IT Facilities	14
3.6 Library.....	14
3.7 Student Amenities.....	15
3.8 Financial Resources.....	16
4. Academic Staff, Support Staff, and Preceptors	17
4.1 Staff Recruitment, and Development and Retention Policy/Guidelines.....	17
4.2 Teaching Staff	18
4.3 Preceptors.....	19
5. Student Admission and Support Services	20
5.1 Student Admission and Selection	20
5.2 Student Support Systems.....	21
5.3 Student Representation	22
6. Program Relevance and Curriculum	23
6.1. Program Relevance.....	23
6.2. Curriculum Model and Instructional Methods.....	23
6.3. Scientific Methods.....	24
6.4. Basic Biomedical Sciences	24
6.5. Behavioral and Social Sciences	25
6.6. Professional Public Health Officer Sciences and Skills.....	25
6.7. Curriculum Structure, Composition, and Duration.....	26

6.8 Program Management.....	27
6.9. Linkage With Public Health Practice and the Health Sector	28
7. Teaching-Learning And Assessment.....	29
7.1 Teaching-Learning	29
7.2 Assessment.....	30
8. Student Progression and Graduate Outcomes.....	33
9. Continual Quality Assurance	34
10. Research and Development, and Educational Exchanges.....	35
Basic Standards	35
Quality Improvement Standards.....	35
Annex I. Scope of Practice for Health Professionals In Ethiopia, Food, Medicine and Health Care Administration and Control Authority, 2013.....	36
Annex II. List of Public Health Officer Skill Laboratory Equipment (Anatomic Models/Mannequins/Medical Supplies, and Consumables/Wall Charts	38
Annex III. List of Text and Reference Books for Public Health Officer Program	45
Annex IV. Dictionaries and Encyclopedias	49
Annex V.National Service Delivery Guidelines and Protocols For Public Health Officer Program	50
Annex VI. Indicative Sources of Evidence for Verification of Standards.....	51
References.....	55

ABBREVIATIONS

ART	Antiretroviral Therapy
CEU	Continuing Education Unit
CPD	Continuing Professional Development
CPR	Cardio-Pulmonary Resuscitation
DVD	Digital Video Disk
FMOH	Federal Ministry of Health
HEI	Higher Education Institution
HERQA	Higher Education Relevance and Quality Agency
HIV	Human Immunodeficiency Virus
ICT	Information and Communication Technology
IMNCI	Integrated Management of Neonatal and Childhood Illness
IPD	Inpatient Department
IQA	Internal Quality Assurance
IT	Information Technology
IV	Intravenous
KSA	Knowledge, Skills, and Attitudes
LP	Lumbar Puncture
MPH	Master of Public Health
MVA	Manual Vacuum Aspiration
NG	Nasogastric (Tube)
OPD	Outpatient Department
PHO	Public Health Officer
PMTCT	Prevention of Mother-to-Child Transmission
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
WHO	World Health Organization

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 public health officers (PHOs). 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 these accreditation and quality improvement standards for PHO programs. The standards will serve the following purposes:

- Provide a framework against which PHO schools can measure themselves, identify the gaps, and implement quality enhancement programs.
- Guide regulatory authorities like HERQA to accredit PHO 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 Public health officer education. This could be done in different ways, such as:

I. Public Health Officer 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 Public Health Officer 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 Public Health Officer schools.

DEFINITIONS

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

Areas are defined as broad components in the structure, process and outcome of Public Health Officer 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 Public Health Officer 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 Public Health Officer schools and basic Public Health Officer education. Fulfilment of or initiation to meet some or all of such standards should be documented by Public Health Officer schools. Fulfilment of these standards will vary with the stage of development of the Public Health Officer 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 215 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 examples 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 Public Health Officer 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 Public Health Officers are:
 - ◆ Competent at a basic level and capable of undertaking the role of Public Health Officer 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 Public Health Officer School **should** ensure that the program goal addresses:

- Aspects of global health (Q 1.1.1)
- Operational and problem-solving public health 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 Public Health Officer 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 Public Health Officers undertake, formally and informally, to maintain, update, develop, and enhance their knowledge, skills, and attitudes in response to the needs of their patients/clients.

Social accountability would include willingness and ability to respond to the needs of society, patients, and the health and health-related sectors and to contribute to the national and international developments in public health sciences by fostering competencies in health care, public health education, and public health 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 public health officer 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.

1.2 PARTICIPATION IN THE FORMULATION OF THE PROGRAM GOALS AND OUTCOMES

Basic Standard

The Public Health Officer school must ensure that:

- Its principal stakeholders participate in formulating program goals and outcomes (B 1.2.1)

Quality Improvement Standard

The Public Health Officer 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 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.

1.3 INSTITUTIONAL AUTONOMY AND ACADEMIC FREEDOM

Basic Standards

The Public Health officer 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 Public Health Officer 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 interested 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 PROGRAM

Basic Standards

The Public Health Officer 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 knowledge, skills, and attitudes (B 1.4.2)
 - ◆ Their commitment to the skills in lifelong learning (B 1.4.3)
 - ◆ The health needs of the community, the needs of the health care system, their future role in the health sector, and other aspects of social accountability (B 1.4.4) (See Annex I: Public Health Officer Scope of Practice)
- 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 Public Health Officer 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 of student engagement in health and health related researches and draw attention to primary healthcare related outcomes (Q 1.4.2)
- Ensure that educational outcomes address aspects of global health (Q 1.4.3)

Annotation

Educational outcomes refer to statements of knowledge, skills, and attitude that students are expected to demonstrate at the end of a period of learning.

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

Refer to annotations in 1.2 for *principal stakeholders*.

2. GOVERNANCE, LEADERSHIP, AND ADMINISTRATION

2.1 GOVERNANCE OF THE PROGRAM

Basic Standard

The Public Health Officer school **must**:

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

Quality Improvement Standards

The Public Health Officer 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 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 PHO school, curriculum, admission policy, staff recruitment and selection policy, and decisions on interaction and linkage with public health practice and the health sector as well as other external relations.

Refer to annotations in 1.2 for *principal stakeholders*.

2.2 ACADEMIC LEADERSHIP OF THE PROGRAM

Basic Standards

The Public Health Officer school **must**:

- Describe the responsibilities and relationships of its academic leadership for definition and management of the Public Health Officer educational program. (B 2.2.1)
- Have a designated leader (a Public Health Officer who has a Master's or Doctoral Degree and 2 years of experience in the academic area) (B 2.2.2)

Quality Improvement Standard

The Public Health Officer school **should**:

- Periodically evaluate its academic leadership in relation to achievement of its program goals 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 school leader, vice school leader, heads of departments/units, and chairs of standing committees.

2.3 ADMINISTRATIVE STAFF AND MANAGEMENT

Basic Standard

The Public Health Officer school **must**:

- Have an adequate number of qualified 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 Public Health Officer 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 Public Health Officer school.

2.4 EDUCATIONAL BUDGET AND RESOURCE ALLOCATION

Basic Standards

The Public Health Officer school **must**:

- Have a clear line of responsibility and authority for resourcing the program, including a dedicated educational budget (B 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 Public Health Officer program **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 into account development in public health sciences and health needs of the society (Q 2.4.3)

2.5 INTERACTION WITH THE HEALTH SECTOR

Basic Standards

The Public Health Officer 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 Public Health Officer 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 PHOs 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-related 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 Public Health Officer school sends students to a certain health sector for practice; in exchange, staff from the health sector is 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 Public Health Officer school **must**:

- Have lecture halls/classrooms for group, tutorial, and seminar activities with adequate space (1.4m²/student for group/tutorial and 1.6m²/student for seminar) (B 3.1.1)
- Ensure that the rooms are equipped with:
 - ◆ Sufficient and comfortable chairs and tables for the number of students and instructors (movable armchairs and/or chair with tables) (B 3.1.2)
 - ◆ Clean projection wall/screen (B 3.1.3)
 - ◆ Writing board with different colors of markers and board cleaner (B 3.1.4)
- Ensure that the rooms are well illuminated either with natural or artificial source (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 (1 toilet per 100 students, near lecture rooms) (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 Public Health Officer 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, conventional, 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 laptop 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 Public Health Officer school **must 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 book shelf (B 3.2.7)
 - ◆ Nearby toilets, separate for males and females (1 toilet for 20 instructors) (B 3.2.8)

Quality Improvement Standard

The Public Health Officer school **should have:**

- A regular maintenance schedule for office equipment (Q 3.2.1)

3.3 SKILLS DEVELOPMENT CENTER/LABORATORY

Basic Standards

The Public health Officer school **must:**

- Have a laboratory to practice cadaver dissection, 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 is relevant to their 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 II: List of Public Health Officer Skill Lab Equipment) (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, and electronic learning resources) (B 3.3.12)
- ◆ A regular cleaning schedule and follow-up for the facility (B 3.3.13)

Quality Improvement Standards

The Public Health Officer school **should**:

- Ensure that the skills lab is properly organized, and managed by a dedicated 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 Public Health Officer 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 work as preceptors (B 3.4.2)
 - ◆ A range of clinical practice sites where graduates are expected to work (hospital, health center, and community practice sties) (B 3.4.3)
 - ◆ A practice standard 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 Public Health Officer practice experiences including sites for practice in:
 - ◆ Medical care (outpatient and inpatient department) (B 3.4.5)
 - ◆ Surgical care (outpatient department [OPD], inpatient department [IPD], and operating room organized to provide emergency and elective surgery) (B 3.4.6)
 - ◆ Pediatric care (IPD and OPD including EPI) (B 3.4.7)
 - ◆ Gynecological care (OPD and IPD) (B 3.4.8)
 - ◆ Antenatal, labor, delivery, postnatal care, and family planning services (B 3.4.9)
 - ◆ Specialty care for HIV, tuberculosis (TB), and sexually transmitted infections (STIs) (B 3.4.10)
 - ◆ Intensive care services (B 3.4.11)
 - ◆ Dental clinic (B 3.4.12)
 - ◆ Ear, nose, and throat and ophthalmology unit (B 3.4.13)
 - ◆ Dermatology 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 protocols and service delivery guidelines, pocket guides and reference books, learning tools/guides that indicate lists of competencies, assessment tools like checklists, personal protective equipment, essential equipment as per the competency, first aid kits, drugs as per the competency taught, and uniforms as per the practical site standards (B 3.4.17)
- Ensure easy accessibility of clinical practice sites for students, instructors, and preceptors including transport facilities to and from practical sites (B 3.4.18)
- Ensure that the clinical practical sites implement recommended infection prevention and patient safety practice (B 3.4.19)

Quality Improvement Standards

The Public Health Officer 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 remedial plan (Q 3.4.2)
- Ensure that the clinical practice sites have a room with adequate chairs and tables where instructors and students can meet to review objectives and discuss practice (Q 3.4.3)
- Ensure that the clinical practice sites have a mini-library with essential reference books and guidelines (Q 3.4.4)
- Use accredited clinical practice sites (Q 3.4.5)

3.5 IT FACILITIES

Basic Standards

The Public Health Officer 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 Public Health Officer school **should**:

- Have subscriptions to educational websites/resources for staff and student 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 Public Health Officer 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 that accommodates 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 reference materials (in a ratio of 1:15 students) relevant to the courses taught, and textbooks for all students (in a ratio of 1:5 students) for both clinical and public health courses (B 3.6.9) (See **Annex III** for a list of textbooks and reference books for the Public Health Officer program)
- 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 V: National Service Delivery Guidelines) (B 3.6.11)

Quality Improvement Standards

The Public Health Officer school **should:**

- Have an automated library system (for recording, cataloging, and ensuring the security of materials) (Q 3.6.1)
- Have a system to take feedback from users and update the services on a regular basis (Q 3.6.2)
- Be open 24/7 (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 and 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 Public Health Officer school/department **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)
- Ensure that different facilities on campus are accessible to students with disabilities (B 3.7.5)

Quality Improvement Standards

The Public Health Officer school/department **should have:**

- Regular/scheduled facility inspection and maintenance services (Q 3.7.1)
- A student complex providing a variety of services (Q 3.7.2)

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 Standards

The Public Health Officer 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 Public Health Officer 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, inter-professional activities, 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, SUPPORT STAFF, AND PRECEPTORS

4.1 STAFF RECRUITMENT, AND DEVELOPMENT AND RETENTION POLICY/GUIDELINES

Basic Standards

The Public Health Officer school **must**:

- Ensure the existence of a clearly stated, appropriate, and effectively implemented policy and procedure for recruitment and promotion of staff that outline the:
 - ◆ Type, responsibilities, and balance of the academic staff of the basic biomedical sciences, professional courses (clinical and public health courses), and the behavioral and social sciences required to deliver the curriculum adequately (B 4.1.1)
 - ◆ 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)
 - ◆ Specific responsibilities of its academic staff (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 academic staff performance evaluation 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 Public Health Officer 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)
- Formulate its policy for staff recruitment and selection, taking 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 issues of relevance to the school and the curriculum.

4.2 TEACHING STAFF

Basic Standards

The Public Health Officer 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 attachment are in line with specific profession requirement and local context (B 4.2.2)
- Have academic staff with the following qualifications:
 - ◆ Master's Degree or above (Master of Public Health [MPH], epidemiology, reproductive health , health service management, and related fields 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/throat to provide major 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 a 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 with a Bachelor's Degree in the public health profession (B 4.2.8)
- Ensure that each instructor has taken a course on teaching methodology that enables him/her to teach and assess public health officer students effectively (B 4.2.9)

Quality Improvement Standards

The Public Health Officer school **should:**

- Have a ratio of academic staff to students of 1:5 for practical teaching (Q 4.2.1)
- Require that all instructors (classroom, skills lab, and practical) with Master's Degree and above qualification (Q 4.2.2)
- Ensure that instructors are involved in providing clinical/community services preferably related to their specialty (Q 4.2.3)

Annotation

Qualifications of academic staff would mean appropriateness of the high-level trainings relevant to the course being taught. A school for Public Health Officers should have academic staff with the following qualifications to teach major/professional courses (general MPH, epidemiology, reproductive health, health service management, and related fields for major public health courses, and Master's/specialization in surgery, internal medicine, obstetrics and gynecology, pediatrics, dermatology, radiology, ophthalmology, dentist, ear/nose/throat, etc. for major clinical courses).

4.3 PRECEPTORS

Basic Standards

The Public Health Officer School **must:**

- Have a written guideline/criteria for selection of preceptors who are working at practical/clinical sites and providing service (B 4.3.1)
- Ensure that the preceptors:
 - ◆ Are at least Public Health Officers or general practitioners with minimum of 2 years of service in the specific area; at clinical practice sites, a specialist/medical practitioner in the respective ward can be assigned as preceptor (B 4.3.2)
 - ◆ Have a current license to practice (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 practical experience is sufficient to provide individualized instruction, guidance, and supervision (B 4.3.6)

Quality Improvement Standards

The public health officer 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 public health professional and/or 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 SERVICES

5.1 STUDENT ADMISSION AND SELECTION

Basic Standards

The Public Health Officer school **must**:

- Have a written policy/guideline/document 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 Public Health Officer school **should**:

- State the relationship between selections, the mission of the school, the educational program, and the 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 public health officers, 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 Public Health Officer 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 Public Health Officer school **must:**

- Ensure that Public Health Officer 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 (e.g., remedial support, peer-assisted learning), social, and financial needs (B 5.2.2)
 - ◆ 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 regulation 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 Public Health Officer 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 Public Health Officer 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 Public Health Officer 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 Public Health Officer 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 Public Health Officer program **must:**

- Identify and address national health priorities, the needs of the society, the present and emerging role of the public health officer, 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 Public Health Officer 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 Public Health Officer school **must:**

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

Quality Improvement Standards

The Public Health Officer 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 public health 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 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 teaching/learning and assessment methods. The curriculum should set out what knowledge, skills, and attitudes 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, demonstrations, skills training in skill laboratory, 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 METHODS

Basic Standards

The Public Health Officer school **must**, throughout the curriculum, teach:

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

Quality Improvement Standard

- The Public Health Officer school **should** include elements of original or advanced research in the curriculum and ensure that students engage in research activities (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 Public Health Officer 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 public health as professionals and colleagues.

6.4. BASIC BIOMEDICAL SCIENCES

Basic Standards

The Public Health Officer school must identify and incorporate in the curriculum:

- The contributions of the biomedical sciences to create understanding of the scientific knowledge (B 6.4.1)
- Concepts and methods fundamental to application in public health practice (B 6.4.2)

Quality Improvement Standards

The public health officer 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 include anatomy, biochemistry, physiology, embryology and histology, immunology, microbiology (including bacteriology, parasitology, and virology), pathology or pathophysiology, and pharmacology.

6.5. BEHAVIORAL AND SOCIAL SCIENCES

Basic Standard

The Public Health Officer school **must**:

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

Quality Improvement Standards

The Public Health Officer 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)
- The current and anticipated needs of the society and the health care system (Q 6.5.2)
- The changing demographic and cultural contexts (Q 6.5.3)

Annotations

Behavioral and social sciences would depending on local needs, interests, and traditions include community medicine, global health, anthropology, psychology, sociology, public health, and social medicine.

Professional ethics deals with moral issues in public health practice such as values, rights, and responsibilities related to public health officer behavior and decision making.

6.6. PROFESSIONAL PUBLIC HEALTH OFFICER SCIENCES AND SKILLS

Basic Standards

The Public Health Officer school **must**:

- In the curriculum, identify and incorporate professional Public Health Officer courses (to ensure that students acquire sufficient knowledge and professional skills to assume responsibility after graduation (B 6.6.1)
- Ensure that a reasonable part of the program is spent in practicing the essential skills (public and clinical) in relevant settings (B 6.6.2)
- Specify the amount of time spent in training in major professional courses (B 6.6.3)

Quality Improvement Standards

The Public Health officer school **should**:

- Adjust and modify in the curriculum the contributions of the professional Public Health Officer courses to:
 - ◆ Scientific, technological, and clinical developments and (Q 6.6.1)
 - ◆ The current and anticipated needs of the society and the health care system (Q 6.6.2)
- Structure the different components of the professional skills training according to stage of the study program and in a manner that ensure early exposure of students to practice (Q 6.6.3)

Annotations

Professional Public Health officer courses refer to human nutrition, reproductive health, population and development, health service management, health economics, health ethics and legal medicine, environmental health ecology, disaster prevention and preparedness, communicable disease control, health education, biostatistics, health informatics, epidemiology, internal medicine, surgery, pediatrics, obstetrics and gynecology, dentistry, ear, nose, and throat, ophthalmology, diagnostic radiology, dermatology, and psychiatry.

A reasonable part would mean about one-third of the program.

Essential Public Health Officer skills: Graduates from a Public Health Officer program must have the core competencies, interest in health, and a desire to assist individuals, groups, and populations in improving and enhancing health status, through the delivery of effective clinical and public health services for the community. In addition, they need information-gathering skills, critical thinking, cognitive skills, and psychomotor skills. They must also demonstrate the emotional health required for full use of their intellectual abilities, in the context of the physical, emotional, and mental demands of the program.

6.7. CURRICULUM STRUCTURE, COMPOSITION, AND DURATION

Basic Standards

The Public Health Officer school **must**:

- Describe the content, extent, and sequencing of courses and other curricular elements to ensure appropriate coordination between biomedical, behavioral, social, and professional 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 duration of practical attachments are clearly defined and consistent with the national standards (B 6.7.3)

Quality Improvement Standards

The Public Health Officer school **should**:

- Ensure horizontal integration of associated sciences, disciplines, and subjects (Q 6.7.1)
- Ensure vertical integration of the professional sciences with the 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 public health practice (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 Public Health Officer 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)
- Ensure representation of students and staff from all units/course teams of the school/department in its curriculum committee (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 adds/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 (5 years for regular and at least 6 years for evening programs, with the final year totally dedicated to clerkship) (B 6.8.6)

Quality Improvement Standards

The Public Health Officer 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 PUBLIC HEALTH PRACTICE AND THE HEALTH SECTOR

Basic Standard

The Public Health Officer 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 Public Health Officer school **should**:

- Ensure that the curriculum committee seeks input from the environment in which graduates will be expected to work, and modifies 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 programs and their interrelations in the various stages of training and practice, paying attention to the local, national, regional, and global context. It would include mutual feedback to and from the health sector and participation of teachers and students in activities of the health team. Operational linkage also implies constructive dialogue with potential employers of the graduates as 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 Public Health Officer school **must**;

- Use contemporary teaching principles that stimulate, prepare, and support students to take responsibility for their learning including active learning methods, student-centered approach, demonstration, and facilitative practice in 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 and facilitate learning and 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) (See Annex V: National Service Delivery Guidelines for Public Health Officer Program)
- Ensure the acquisition of knowledge, skills, and attitudes (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)
- Have a presentation plan that contains session objectives, 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 (contents 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 Public Health Officer school **should**:

- Clearly define in the curriculum and demonstrate use of learning methods that may include:
 - ◆ Peer-assisted learning (Q 7.1.1)
 - ◆ Problem/case-based learning (Q 7.1.2)
 - ◆ Reflective learning using a 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 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, name 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 helping and supporting among status equals 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 Public Health Officer 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 means of administration/conducting of assessment, and 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)
- ◆ A quality assurance process of 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 question, essay, short answer), assignments, project works, case presentations, 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 progressively (B 7.2.10)
 - ◆ A mechanism is in place to provide special support to students with poor performance based on assessment results (B 7.2.11)
- 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 Public Health Officer school **should**:

- Have an exam committee that ensures the validity and reliability of student assessment through:
 - ◆ 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 assessment to ensure that assessment methods match the learning outcomes and cover all portions of the course (Q 7.2.2)
- Support 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 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 (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 7.2.8)
- Administer a comprehensive qualifying exam before students are deployed for internship/clerkship to prepare them for the national licensure exam (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 (knowledge, skills, and attitudes) 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 may be 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 Public Health Officer 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 it (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 Public Health Officer 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 public health 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 Public Health Officer (Q 8.0.7)

9. CONTINUAL QUALITY ASSURANCE

Basic Standards

The Public Health Officer school **must**:

- 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 an adequate 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, and training on 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 9.0.6)

Quality Improvement Standards

The Public Health Officer 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, 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, accommodating the interests of the different groups of stakeholders (Q 9.0.5)

10. RESEARCH AND DEVELOPMENT, AND EDUCATIONAL EXCHANGES

Basic Standards

The Public Health Officer 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 for students in line with the country's priority health care and developmental needs (B 10.0.2)
- Allocate 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 faculty time for consultation and budget for students' research/directed studies (for transportation, data collection, chemical/reagent purchase, stationery) (B 10.0.6)

Quality Improvement Standards

The public health officer **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 member as a part of a research team undertake research and publishes at least one article in a reputable journals 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. SCOPE OF PRACTICE FOR HEALTH PROFESSIONALS IN ETHIOPIA, FOOD, MEDICINE AND HEALTH CARE ADMINISTRATION AND CONTROL AUTHORITY, 2013

I. CURATIVE AND REHABILITATIVE SERVICES (PROVIDES COMPREHENSIVE OUTPATIENT AND INPATIENT SERVICE)

- Takes medical history, undertakes physical examination, and orders clinical/lab investigations for clients/patients and makes a diagnosis to identify a disease, disorder, or medical condition
- Orders the application of medical devices and diagnostic appliances (X-ray, ultra sound) prescribed by national regulation for the purpose of patient diagnosis, treatment, rehabilitation, and monitoring
- Advises, counsels, and assists with psychosocial aspects of illness for all clients seeking medical care
- Performs diagnostic procedures through minor invasive techniques (lumbar puncture [LP], fine needle aspiration, Pap smear, samples of peritoneal and pleural fluid, and other minor biopsy) and non-invasive techniques (culture specimens)
- Prescribes, carried out change orders, administers medications when needed, and performs other therapeutic procedures like physiotherapy and counseling
- Administers a substance by inhalation, irrigation, or instillation through enteral or parenteral means
- Manages non-complicated chronic diseases including comprehensive HIV/AIDS diagnosis and treatment and provides palliative care for complicated chronic diseases
- Manages, refers, and ensures continuity of care in emergency medical, surgical, and obstetric conditions such as acute exacerbation of asthma, diabetic ketoacidosis, hypertensive crisis, severe and complicated malaria, meningitis, premature rupture of membranes, uterine rupture pre-eclampsia/eclampsia, postpartum hemorrhage, status epilepticus, etc.
- Records information on patient/client medical history, examination, diagnosis, and treatment provided on the appropriate patient/client charts
- Manages normal delivery, conducts instrumental delivery, and refers complicated cases
- Manages nutritional disorders
- Provides Integrated Management of Neonatal and Childhood Illnesses (IMNCI)
- Performs minor obstetric/gynecological and surgical procedures

Table I: List of Procedures That Graduate Public Health Officer Must Perform

<ul style="list-style-type: none"> • Tooth extraction • Wound repair • Incision drainage and aspiration of abscess, cyst • Excision and removal of skin lesions, cysts, and lipomas • Removal of foreign body from ear, nose, and skin • Circumcision • Burn treatment • Amputation of finger, toes 	<ul style="list-style-type: none"> • Urethral dilation • Episiotomy • Cervical tear repair • Neonatal resuscitation • Chest tube insertion • Tracheostomy • Intubation • Evacuation of uterus (manual vacuum aspiration [MVA], sharp metallic curettage, and dilation and curettage) • Voluntary surgical contraception
---	--

- Certifies and gives testimony for the procedures that are carried out under their disposal according to the medico-legal and ethical standards and applicable laws/regulations
- Admits, follows and discharges patients from health centers/hospitals and makes appointment for follow-up care
- Supervises health professional and other employees engaged in clinical care
- According to the plan of the FMOH Ethiopia, performs additional tasks rendered to the professional practices deemed necessary and with required training

II. PUBLIC HEALTH PLANNING, LEADERSHIP, AND MANAGEMENT

- Designs and assesses community health needs and prioritizes identified problems;
- Collects, documents, processes, and analyzes health and health-related data and disseminates the information
- Plans, organizes, directs, supervises, monitors, and evaluates health service delivery and programs at various levels
- Organizes and leads a team to prevent and control disaster and emergency situations
- Provides technical and programmatic guidance and leadership
- Manages health services, assuming different roles including health center head, medical director, officer, and other managerial roles at different levels of the health system

III. HEALTH PROMOTION AND DISEASE PREVENTION

- Designs and implements health promotion activities through health education and behavioral interventions
- Designs and implements prevention and control of communicable and non-communicable diseases
- Mobilizes individuals, families, and communities for health actions
- Manages and implements other primary, secondary, and tertiary promotive and preventive activities

IV. EDUCATION/TRAINING AND RESEARCH

- Conducts or coordinates continuing education and training
- Is Involved in curriculum development for health science disciplines
- Serves as a teacher/instructor or other ranks in health and health-related disciplines in technical education and vocational training institutions, colleges, and universities
- Promotes and undertakes operational research on health and health-related issues

ANNEX II. LIST OF PUBLIC HEALTH OFFICER SKILL LABORATORY EQUIPMENT (ANATOMIC MODELS/MANNEQUINS/MEDICAL SUPPLIES, AND CONSUMABLES/WALL CHARTS

Models			
No.	Item	Number Required	Remarks
1	Model: Pediatric care simulation	1/station	
2	Model: Susie Simon patient care	>>	
3	Easel: Cervical Dilatation	>>	
4	Model: Advanced childbirth simulators	>>	
5	Model: 48-hour postpartum uterus	>>	
6	Model: Palpation for Leopold maneuvers	>>	
7	Model: Labor and delivery model	>>	
8	Model: Skeleton 168 cm	>>	
9	Model: Articulate human skeleton	>>	
10	Model: Deluxe hospital mannequin	>>	
11	Patient vital sign simulator	>>	
12	Pediatric multi-venous IV arm kit	>>	
13	Female multi-venous IV arm kit	>>	
14	Male catheterization simulator	>>	
15	Childbirth demonstration pelvis	>>	
16	Patient care mannequin adult	>>	
17	Female urethral catheterization simulator	>>	
18	Enema administration simulator	>>	
19	Advanced venipuncture and injection arm	>>	
20	Episiotomy suturing simulator	>>	
21	Cardio-pulmonary (CPR) baby mannequin	>>	
22	CPR child mannequin	>>	
23	CPR adult mannequin	>>	
24	Suturing simulator	>>	
25	Suture practice arm	>>	
27	Blood transfusion arm simulator	>>	
28	Penis and scrotum model	>>	
29	Human uterus and ovary	>>	
31	Embryonic development model, 12-stage	>>	
32	Placenta model	>>	
33	Fetal skull model	>>	
34	Muscle model	>>	
35	Emergency medical training casualty simulation kit	>>	
36	Breast palpation simulator	>>	
37	Family planning educator (simulator)	>>	

Models			
No.	Item	Number Required	Remarks
38	Chest and cardiac auscultation simulator	>>	
39	Tracheostomy simulator	>>	
40	Colostomy simulator	>>	
41	Chest tube insertion model	>>	
Wall Charts, Posters, and Checklists			
No.	Item	Number Required	Remarks
1	Procedure check list for all competencies	1/skills lab	
2	Sneelen's eye chart: E and C	1/skills lab	
3	Head and neck	1/skills lab	
4	The heart	1/skills lab	
5	Nervous system	1/skills lab	
6	Skeletal system	1/skills lab	
7	Autonomic nervous system	1/skills lab	
8	Spinal nervous system	1/skills lab	
9	Digestive system	1/skills lab	
10	Respiratory system	1/skills lab	
11	The lung	1/skills lab	
12	Pharynx and larynx	1/skills lab	
13	The eye	1/skills lab	
14	The nose	1/skills lab	
15	The auditory system	1/skills lab	
16	Pregnancy and birth	1/skills lab	
17	Family planning methods	1/skills lab	
18	Stages of labor	1/skills lab	
19	Embryonic development	1/skills lab	
20	Cardiovascular system	1/skills lab	
21	Muscular system	1/skills lab	
22	The reproductive system (male and female)	1/skills lab	
23	The urinary system	1/skills lab	
24	The kidney	1/skills lab	
25	Teeth and oral cavity	1/skills lab	
26	Tongue and teeth	1/skills lab	
27	The skin/integumentary system	1/skills lab	
28	Breast with disorders	1/skills lab	
29	Growth and development	1/skills lab	
30	Partograph	1/skills lab	
31	Endocrine system	1/skills lab	

Physical Supplies			
No.	Item	Number Required	Remarks
1	Electric supply	As appropriate	
2	Chairs and tables for lab managers	As appropriate	
3	Desktop computers	1/skills lab	
4	Printer	>>	
5	Movable arm chairs and/or chair with table), writing board with marker/chalk and duster/white board cleaner	As appropriate	
8	Television and VCR/DVD player	1/skills lab	
9	Shelf to arrange the equipment	As appropriate	
10	Cabinets with locks for supplies	>>	
11	Appropriate infection prevention supplies: running water, sinks or buckets, soap, towels, and plastic buckets for decontamination, soiled linen, and waste	As appropriate	

Essential Medical Equipment and Supplies

No.	Equipment/Supplies	Number	Remarks
1	Demonstration table	1/station	
2	Bed for model	>>	
3	Child bed	>>	
4	Suction machine	1 in a skills lab	
5	Oxygen concentrator	1 in skills lab	
6	Electrocardiograph (ECG) machine	1 in a skills lab	
7	Defibrillator	1 in skills lab	
8	Pulse oxymeter	1/station	
9	Oxygen cylinder with gauge	2 in skills lab	
10	Chest tube	>>	
11	Chest drainage bottle	>>	
12	Endotracheal tube	>>	
13	Laryngoscope set	>>	
14	Diagnostics set	>>	
15	Neurologic hammer (reflex hammer)	>>	
16	Stethoscope adult	>>	
17	Tuning fork	>>	
18	Oxygen masks (pediatric size)	>>	
19	Oxygen masks (adult size)	>>	
20	Oxygen masks (infant size)	>>	
21	Oxygen masks (neonatal size)	>>	
22	Nasal cannula/catheter	>>	
23	Ambu bags: pediatric and adult sizes	>>	
24	First aid kit	>>	
25	Manual vacuum aspiration (MVA)/evacuation and curettage set	1 in skills lab	
26	Personal protective equipment	1 per student	

No.	Equipment/Supplies	Number	Remarks
27	Sphygmomanometer	1/station	
28	Bed with side rails	1/station	
29	Wooden splint	>>	
30	Wire splint	>>	
31	Stethoscope (with bell and diaphragm)	1/student	
32	Mattress	1/station	
33	Foot rest (wooden)	>>	
34	Over-bed table (with wheels)	>>	
35	Bed pan	>>	
36	Screen (flexible)	>>	
37	Kidney dish (stainless steel), 300 cc	>>	
38	Kidney dish (stainless steel), 500 cc	>>	
39	Kidney dish (stainless steel), 1000 cc	>>	
40	LP set	>>	
41	Tracheostomy set	>>	
42	Biopsy set	>>	
43	Bone marrow aspiration set	>>	
44	Bed-side table	>>	
45	Movable examination light	>>	
46	Galley pot	>>	
47	Delivery kit	>>	
48	Medication tray	>>	
49	Medication cups (meal)	>>	
50	Pill crusher	>>	
51	Needle holders	>>	
52	Scissors of different types	>>	
53	Clip holder	>>	
54	Cast scissors	>>	
55	Pickup forceps with jars	>>	
56	Water sealed drainage system	>>	
57	Rubber bulb syringe	>>	
58	Tissue forceps of different size types	>>	
59	Artery forceps of diff size types	>>	
60	Autoclave, small size	>>	
60	Hot air oven, small size	>>	
61	Pleural and peritoneal biopsy set	>>	
62	Thermometers	>>	
63	Scale: Adult (standing)	1 in a skills lab	
64	Scale: Pediatric	1 in a skills lab	
65	Scale: Infant	1 in a skills lab	
66	Stretchers	>>	
67	Wheelchairs	>>	
68	Walking canes	>>	

No.	Equipment/Supplies	Number	Remarks
69	Crutches	>>	
70	Pelvic meter	1/station	
71	Pediatric bed pans	>>	
72	Adult male urinals	>>	
73	Pediatric urinals	>>	
74	Straight catheters	>>	
75	Foley catheters	>>	
76	(NG Tube) feeding tubes: Adult	>>	
77	(NG Tubes) feeding tubes: Pediatric	>>	
78	Sterile gloves	1 box/station	
79	Disposable gloves	>>	
80	IV cannula adult	>>	
81	IV cannula pediatrics	>>	
82	Ringer's lactate IV fluids	1 bag/station	
83	Dextrose water IV fluids	>>	
84	Normal saline IV fluids	>>	
85	Disposable syringes: 2 cc	1 box/station	
86	Disposable syringes: 5 cc	>>	
87	Disposable syringes: 10 cc	>>	
88	Disposable syringes: 20 cc	>>	
89	Disposable syringes: 50 cc	>>	
90	Distilled water for injection	>>	
91	Garbage pails	1/station	
92	Student practice suturing kit (non-absorbable)	>>	
93	Student practice suturing kit (absorbable)	>>	
94	Plastic aprons	>>	
95	Rubber sheets	>>	
96	Powders	1 sachets/station	
97	Tape line (measuring tape)	1/station	
98	Water bucket	>>	
99	Plaster for dressing (large size)	>>	
100	Tongue blades (wood)	>>	
101	Drainage bags (urine output)	>>	
102	K-Y Jelly	>>	
103	Plaster of Paris (POP)	1 roll/station	
104	Female condom	1 box/station	
105	Male condom	>>	
106	Medication cups	1/station	
107	Iodine solution	1 bottle/station	
108	Alcohol (70%)	>>	
109	Scrub suits: Medium	>>	
110	Scrub suits: Large	>>	
111	Scrub dresses: Medium	>>	

No.	Equipment/Supplies	Number	Remarks
112	Scrub dresses: Large	>>	
113	Elastic bandage	1 roll/station	
114	Cotton roll	>>	
115	Cord clamps	>>	
117	Drape material of different size	>>	
118	Drum (large)	>>	
119	Drum (medium)	>>	
120	Drum (small)	>>	
121	Dust bin	>>	
122	Dust bin (pedal open)	>>	
123	Enema can with tube	>>	
124	Flatus/rectal tube (different sizes)	>>	
125	Foot rest (wooden)	>>	
126	Fracture board	>>	
127	Funnel	>>	
128	Gentian violet	1 bottle/station	
129	Heater	1/station	
130	Hot water bottle	>>	
131	Ice bag	>>	
132	Ice collar	>>	
133	IV Stand (stainless steel with wheel)	>>	
134	Medication cups (meal)	>>	
135	Medication tray	>>	
136	Mucus extractor	>>	
137	Ophthalmoscope	>>	
138	Otoscope	>>	
141	Pillow	>>	
142	Draw sheet	>>	
143	Linen	>>	
144	Blanket	>>	
145	Pillowcase	>>	
146	Plastic air rings	>>	
147	Safety pin	>>	
148	Sand bags	>>	
149	Savlon	>>	
150	Screen (flexible)	>>	
151	Specimen container (cups)	>>	
152	Suturing needle	>>	
153	Swab dish (with lid)	>>	
154	Test tubes	>>	
155	Refrigerator	>>	
156	Endotracheal tube	>>	
157	Suction catheter	>>	

No.	Equipment/Supplies	Number	Remarks
158	Tongue blade (stainless steel)	>>	
159	Trolley (two shelves with wheels)	>>	
160	Dextrose (40%)	1 bag/station	
161	Oral rehydration salt	2 sachets/station	
162	Drugs (injectables, inhalants, suppositories, ointments, oral drugs: capsules, tablets, sublinguals, suspensions)	As appropriate	
163	Vaccines for immunization (all currently available)	As appropriate	
164	Contraceptive options (all currently available)	As appropriate	

ANNEX III. LIST OF TEXT AND REFERENCE BOOKS FOR PUBLIC HEALTH OFFICER PROGRAM

BIOMEDICAL SCIENCE AND GENERAL TEXTBOOKS AND REFERENCES

1. Seely J. (2000). *The Oxford Guide to Writing and Speaking*. Oxford: Oxford University Press.
2. *Effective English Communication for You*.
3. Oshima A and Hogue A. (1991). *College Writing Skills*: McGraw Hill.
4. Rudolph F and Lass AH. (1996). *The Classic Guide to Better Writing*. New York.
5. Giorgis SG. (1991). *Writing for Academic Purpose*. AAU Printing Press.
6. Axelrod RB and Cooper R. (2001). *The St. Martin's Guide to Writing*, 6th ed., Boston: Bedford/St. Martin's.
7. Fiseha A. (2005). *Federalism and the Accommodation of Diversity in Ethiopia: A Comparative Study*, Netherlands, Wolf Legal Publishers.
8. Bayles M. (1989). *Professional Ethics*, 2nd ed. Belmont, Calif.: Wadsworth.
9. Zewde B. (1991). *A History of Modern Ethiopia: 1855–1974*. Addis Ababa: AUU Press.
10. Schafer R. (2003). *Sociology*, New York: McGraw Hill, Inc., page 13.
11. Macaronis JJ. (2008). *Sociology*, 12th ed. Pearson Prentice Hall, page 14.
12. Moore KL. (1992). *Clinically Oriented Anatomy*, 3rd ed. Williams and Wilkins. Philadelphia.
13. Moore KL and Delley AF. (1999). *Clinically Oriented Anatomy*, 4th ed. Lippincott Williams and Wilkins. Philadelphia.
14. Romanes GJ. (1986). *Cunningham's Manual of Practical Anatomy*, Volume 3. Oxford University Press.
15. Vishal K. (2006). *Langman's Medical Embryology*, 10th ed.
16. Kerr JB. (1999). *Atlas of Functional Histology*. Mosby.
17. Young B, Woodford P, and O'Dowd G. (2006). *Wheater's Functional Histology: A Text and Colour Atlas*. Churchill Livingstone.
18. Guyton A and Hall E. (2006). *Textbook of Medical Physiology*, 11th ed. W.B Saunders Company, Philadelphia.
19. Barrett KE et al. (2010). *Ganong's Review of Medical Physiology*, 23rd or 22nd ed.
20. Boron W and Boulpaep EL. (2005). *Medical Physiology. A Cellular and Molecular Approach*, updated ed. Elsevier/Saunders Publisher, Philadelphia Companies, Inc., USA.
21. Vander AJ et al. (2001). *Human Physiology: The Mechanism of Body Function*, 8th ed. McGraw-Hill, Inc., New York.
22. Bhagavan NV. (2002). *Medical Biochemistry*, 4th ed. San Diego, California. An Imprint of Elsevier.
23. Vasudevan DM and Sreekumari S. (2007). *Text Book of Biochemistry for Medical Students*, 5th ed. Jaypee Brothers Medical Publishers, Ltd. New Delhi.

24. Bhagavan NV. (2002). *Medical Biochemistry*, 4th ed. San Diego, California. An Imprint of Elsevier.
25. Chatterjea MN and Shinde R. (2005, 2007). *Text Book of Medical Biochemistry*, 6th and 7th eds.
26. Brooks GF, Butel JS, and Morse SA. (2007). *Jawetz Medical Microbiology*, 24th ed.
27. Mims C et al. (1993). *Medical Microbiology*.
28. Boyd R. (1995). *Basic Medical Microbiology*, 5th ed.
29. Cheesbrough M. (2000). *District Laboratory Practice in Tropical Countries*, Vo 2.
30. Greenwood D et al. (2012). *Medical Microbiology: A Guide to Microbial Infections: Pathogenesis, Immunity, Laboratory Diagnosis and Control*. Churchill Livingstone.
31. Katzung BG, Masters SB, Trevor AJ. (2011). *Basic & Clinical Pharmacology*, 11th ed. McGraw-Hill Medical Publishing Division.
32. Brunton LL, Lao JS, and Parker KL. (2005). *Goodman and Gillman's The Pharmacological Basis of Therapeutics*, 11th ed.
33. Mycek MJ, Harvey RA, and Champe PC. (1996). *Lippincott's Illustrated Reviews: Pharmacology*, 2nd ed.
34. Pharmacology for Health Science Students, Lecture Note Series.
35. Jeffrey HC and Leach RM. (1975). *Atlas of Medical Helminthology and Protozoology*, 2nd ed. Churchill Livingstone.
36. Cheesbrough M. (2000). *District Laboratory Manual for Tropical Counties*, Vol. I. Cambridge University Press.
37. Dailey MD. (1996). *Essentials of Parasitology*, 6th ed.
38. Schmidt GD. (1994). *Essentials of Parasitology* 4th ed.
39. Girma M and Mohammed A. (2003). *Parasitology for Medical Laboratory Technology Students – Lecture Note Series*.
40. Rubin E and Reisner HM. (2009). *Essentials of Rubin's Pathology*, 5th ed.
41. Kuman V et al. (2010). *Robbin's and Cotran Pathologic Basis of Disease*, 8th ed.
42. Underwood JCE. (2004). *General and Systemic Pathology*, 4th ed.
43. *EPHTI General Pathology Lecture Note*. (2004).

PUBLIC HEALTH TEXTBOOKS AND REFERENCE MATERIALS

44. Getnet M. (2003). Health Education for Health Science Students, Lecture Series, Department of Community Health, Addis Ababa University, 2003 [Available in Library of College of Medicine & Health Sciences in Sufficient Copies]
45. Karen G et al. (2002). *Health Behavior and Health Education, Theory, Research and Practice*, 3rd ed.
46. Green LW and Kreuter, M.W. (1999). *Health Promotion Planning: An Educational and Ecological Approach*, 3rd ed. Mountain View, CA: Mayfield Publishing Company.
47. Lewis FM and Rimer BK (eds.). (1990). *Health Behavior and Health Education: Theory, Research, and Practice*. San Francisco: Jossey-Bass, 1990.

48. Webb GP. (2008). Nutrition: A Health Promotion Approach, 3rd ed. Hodder Arnold, UK, 338 Euston Road, Landon NW1 3BH.
49. Belachew T. (2007). Human Nutrition for Health Science Students. Jimma University.
50. FMOH (2004). Protocol for the Management of Severe Acute Malnutrition.
51. FMOH. (2004). National Guideline for Control and Prevention of Micronutrient Deficiency. (June).
52. Gibson RS. (1990). Principles of Nutritional Assessment. Oxford University Press.
53. Worku F and Gebreselasie S. (2008). Reproductive Health Lecture Note for Health Sciences Students. University of Gondar.
54. Tulchinsky TH and Varavikova EA. (2000). The New Public Health: An Introduction for the 21st Century, Chapter 6.
55. Damene M (2008). Population and Development Lecture Note for Health Sciences Students. Haromaya University.
56. Pol LG and Thomas RK. (2000). The Demography of Health Care, 2nd ed.
57. McMahon R, Barton E, and Piot MA. (1992). On Being In Charge: A Guide for Middle-Level Management in Primary Health Care. WHO, Geneva.
58. Stoner JAF, Freeman RE, and Gilbert DR. (1998). Management. Prentice-Hall of India. New Delhi.
59. Jira C, Feleke A, and Mitike G. (2003). Health Service Management for Health Science Students. Lecture Note Series. The Carter Center. (January).
60. Kebede B. Introduction to Environmental Health. Lecture Note Series.
61. Teka GE. (1982). Water Supply, Ethiopia.
62. Teka GE. (1984). Human Waste Disposal, Ethiopia: A Practical Application to Environmental Health.
63. Benenson AS. (1995.) Control of Communicable Diseases Manual, 16th ed., an official report of the American public Health Association, The United Book Press, Inc., Baltimore, Maryland, USA.
64. Lecture Note Series: Disaster Prevention & Preparedness.
65. Degu G. and Tessema F. (2005). Biostatistics for Health Science Students, Lecture Note Series. Universty of Gondar.
66. Astatkie A and Muktar E. (2009). A Brief Lecture Note on Biostatistics for Medicine and Health Science Students. HawassaUniversity. (December).
67. Bland M. (2000). An Introduction to Medical Statistics. OxfordUniversity Press.
68. Shortliffe EH. (2001). Medical Informatics: Computer Applications in Health Care and Biomedicine, 2nd ed. Springer-Verlag.
69. Bemmell JHV and Musen MA. (1997). Handbook of Medical Informatics. Springer-Verlag.
70. Curriculum Development Center Program, Component 6: Health Management Information Systems Instructor Manual, Version 3.0/Spring 2012.
71. Kebede Y, Weldemichael K, and Lulu K. (2003). Lecture Note of Epidemiology for Health Sciences.
72. Fletcher M. (1992). Principles and Practice of Epidemiology. Addis Ababa, Ethiopia.

73. Greenberg RS, Daniels SR, Flanders WD, Eley JW, Boring JR, III. (2005). Medical Epidemiology, 4th ed. McGraw Hill, USA.

CLINICAL MEDICINE TEXTBOOKS AND REFERENCES

74. Harison's Principles of Internal Medicine, 16th–18th eds.
75. Internal Medicine Lecture Note for Health Officers
76. Guidelines for Management of OIs and ART in Adolescents and Adults in Ethiopia
77. Davidson's Principles and Practices of Medicine, 21st ed.
78. Nelson Textbook of Pediatrics, 17th ed.
79. Lecture Note of Pediatrics
80. Danforth's Obstetrics and Gynecology
81. Operative Gynecology
82. Shaw's Textbook of Gynecology
83. NMS Obstetrics and Gynecology
84. Obstetrics by Ten Teachers, 8th ed.
85. Diagnostic Radiology and Genitourinary Imaging, 3rd ed.
86. Gawkrödger DJ. Dermatology, An Illustrated Color Textbook, 3rd ed.
87. Psychiatry Lecture Note
88. Ahuja, N. A Short Textbook of Psychiatry
89. Cheesbrough M, Medical Laboratory Manual for Tropical Countries, Vol. I
90. Tietz Fundamentals of Clinical Chemistry, Chapter 4
91. Baker F et al. (1985). Introduction to Medical Laboratory Technology, 6th ed.
92. Bauer JD. (1982). Clinical Laboratory Methods, 9th ed.
93. Smith SF, Duell D, and Martin B. (2004). Clinical Nursing Skills: Basic to Advanced Skills, 6th ed.
94. Craven RF and Hirnle J. (2009). Fundamental of Nursing: Human Health and Function, 6th ed. Lippincott Williams & Wilkins, USA
95. Barbara Batts
96. Hutchison's Principle of Physical Diagnosis
97. Fischer JE and Baker RJ. Mastery of Surgery, 4th edition, Vol. 162
98. Tjandra J et al. Textbook of Surgery, 3rd ed.
99. Essentials of Surgery, 3rd edition, problems diagnosis and management

ANNEX IV. DICTIONARIES AND ENCYCLOPEDIAS

A. PROGRAM/SUBJECT-SPECIFIC DICTIONARIES

No.	List of Dictionaries	Year of Publication	Number of Copies per 50 Students or 1 Class	Remarks
1	Medical dictionary	Latest	2	
2	Pharmaceutical dictionary	Latest	2	

B. PROGRAM/SUBJECT-SPECIFIC ENCYCLOPEDIAS

No.	List of Encyclopedias	Year of Publication	Number of Copies per 50 Students or 1 Class	Remarks
	Martindale	Latest	5	
	Encyclopedia on general matters	Latest	1	

ANNEX V. NATIONAL SERVICE DELIVERY GUIDELINES AND PROTOCOLS FOR PUBLIC HEALTH OFFICER PROGRAM

- Health policy of Ethiopia
- The current Health Sector Development Program document
- HIV/AIDS policy and guideline
- Implementation guideline for TB/HIV
- National guideline for HIV/AIDS and nutrition
- National guideline for family planning Services
- ART guideline
- Prevention of mother-to-child transmission of HIV (PMTCT) guideline
- Tuberculosis treatment guideline
- Infection prevention and patient safety guideline/reference guide/
- Essential nutrition guideline – National nutrition program
- IMNCI guide, if not incorporated in the curricula
- Malaria prevention and treatment guideline
- National drug formulary/essential drug list
- Ethiopian Hospitals Reform and Implementation Guidelines (EHRIG)
- National guideline for Abortion/Policy
- STI prevention and treatment guideline
- National protocol for referral system

ANNEX VI. 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 pharmacy 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
- Documentation of staff job descriptions and workload
- Documented evidence on academic staff engagement in teaching, research, and community services
- Documents on academic staff 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 students' 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 handbook
- 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, students' 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; 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, skill lab sessions,
- 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 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 feedback 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 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
- Reports and dissemination documents of research findings of academic staff/students

REFERENCES

1. Program Level Quality Audit Manual, HERQA, HERQA Publication Series 05, March 2013, Ethiopia.
2. Accreditation Standards for Pharmacy Programs in Australia and New Zealand. Australian Pharmacy Council Ltd., December 2012, Australia.
3. Generic Performance Standards for Pre-Service Education in Health, February 2012, Jhpiego-Ethiopia.
4. Basic Medical Education WFME Global Standards for Quality Improvement. The 2012 Revision, World Federation of Medical Education Office. University of Copenhagen, Denmark, 2012.
5. National Harmonized Curriculum, Modular Curriculum of Degree of Bachelor of Science in Public Health, Addis Ababa, 2013, GC.
6. Scope of Practice for Health Professionals in Ethiopia, Food, Medicine and Health Care Administration and Control Authorities, 2013.

