



2024

Ethiopian Health Professionals Licensing Examination(EHPLE)

INFORMATION BOOKLET

**PUBLIC HEALTH**



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**MINISTRY OF HEALTH - ETHIOPIA**

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## Message From the State Minister, Ministry of Health -Ethiopia



**Mrs. Frehiwot Abebe**

Improving healthcare quality is a global priority for sustainable development, with high quality healthcare being a key component of universal health coverage. One strategy to maintain health care standards is through provision of health professional competency assessment. Consequently, in 2019, the Ministry of Health Ethiopia, initiated the Ethiopian Health Professionals Licensing Examination (EHPLE) for undergraduates in seven health disciplines, which has since expanded to include 13 health disciplines.

The main goal of this competency assessment is to identify health professionals with minimal competencies necessary to perform their duties safely and competently, thus enhancing the quality of health care services. This initiative is overseen by a dedicated Health and Health Related Institutions and Professionals' Regulatory Lead Executive Office (LEO), comprising four desks, which plays a pivotal role in strengthening the system and enabling the LEO to conduct the competency exam more extensively and with improved organization and quality.

It is important to note that this competency assessment differs significantly from traditional academic or employment examinations. Hence, this information booklet has been created to address the informational needs of both examinees and teaching faculty regarding the Ethiopian Health Professionals' Licensure Examination. Additionally, it aims to facilitate the assessment process, while promoting transparency and ensuring the sustainability of the program.

The preparation of this guideline involved the collaboration of esteemed experts from various higher education institutions, AAU-IER, the Ministry of Health, JHPIEGO-Ethiopia, Amref/HWIP, Health Professionals' Associations, and the Ministry of Education. Their invaluable contributions are acknowledged with sincere gratitude, alongside appreciation for the Ministry of Health staff for their unwavering commitment and hard work throughout the project.

## Acknowledgements

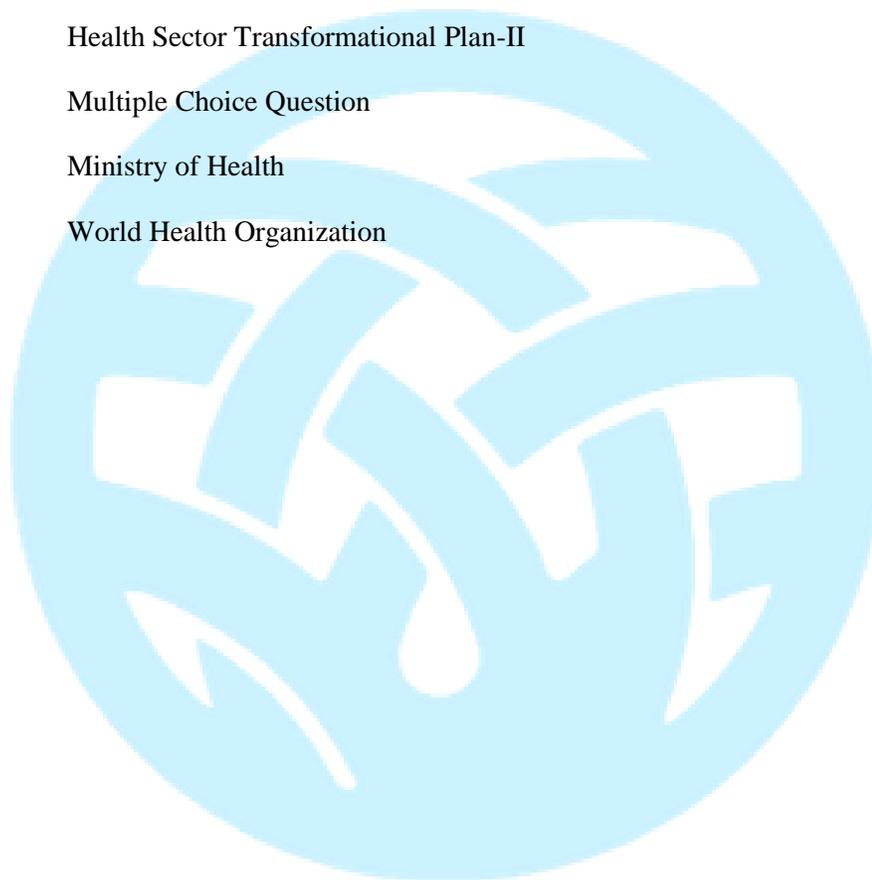
This Information Booklet for Ethiopian Health Professional's Licensing Examinations is a contribution from several educators, researchers, students and concerned individuals with a genuine interest to propel Ethiopia's medical and health sciences education forward.

The Ministry of Health is grateful for the contribution of many individuals and institutions in realizing this endeavor. Among these are Professional Associations, Student Association, Higher Education Institutions (both public and private), JHPIEGO-Ethiopia, AMREF/HWIP, MOE (Ethernet), UNFPA, AAU-IER and all HHRIPR LEOs staff.



## Acronyms and Abbreviations

EHPLE	Ethiopian Health Professionals Licensing Examination
ETA	Educational and Training Authority
HEIs	Higher Education Institutions
HHrIPR-LEO	Health and Health-related Institutions and Professionals Regulatory Lead Executive Office
HSTP-II	Health Sector Transformational Plan-II
MCQ	Multiple Choice Question
MoH	Ministry of Health
WHO	World Health Organization



## Purpose of the Information Booklet

The Ethiopian Health Professionals' Licensing Examination (EHPLE) Information Booklet serves as a comprehensive guide for those individuals seeking information about the exam. It typically outlines basic information for candidate registration, exam development and administration processes and procedures, result notification, and the licensing process. It also includes information on the exam framework, i.e., the exam domain, sub-domain, content, process, and task, with sample exam items specific to each profession.

The publication of this Booklet is crucial for the following reasons:

- **Clarity and guidance:** It provides clear information about the exam by ensuring candidates understand the necessary information to prepare them.
- **Accessibility:** It serves as a readily accessible resource for individuals pursuing to take the exam, consolidating essential information in one document and facilitating easy access to necessary details. It also helps other stakeholders who might be interested in such resources.
- **Transparency:** It promotes transparency in the examination process and fosters trust among stakeholders about the exam.

In summary, the publication of this Booklet is essential for creating a transparent, standardized, and accessible framework that guides candidates through the EHPLE process.

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## Definition of terms

- **Domain:** a broad category or area of knowledge or skills of a profession
- **Sub-domain:** a subset of a broader domain that focuses on knowledge or skills related to the overarching domain
- **Content:** a more specific subcategory, which is a breakdown of the sub-domain
- **Task:** the responsibility, knowledge, skill, and attitude of a junior undergraduate professional in an actual work environment
- **Process:** a systematic sequence of steps or actions designed to achieve a specific outcome
- **Learning outcome:** a clear and measurable statement that describes what the examinee is expected to know or be able to do
- **Relative emphasis:** the proportional importance or weight assigned to different content areas or categories within the assessment
- **Item:** a particular multiple-choice question
- **Item developer:** a subject matter expert responsible for writing test items or questions that make up the examination
- **Item reviewer:** a subject matter expert responsible for reviewing and refining the test items or questions that make up the examination
- **Standard setting:** a process of determining a cut-off point or passing score for an exam
- **Item difficulty index:** a statistical measure that indicates the proportion of examinees who answered a particular test item correctly
- **Discrimination index:** a statistical measure that evaluates how well a particular test item differentiates between high-performing and low-performing examinees
- **Admission paper:** a printout paper generated by the system after completing registration that contains the examinee's photo, QR code, and necessary information

## **1. Introduction**

### **1.1. Background**

Competency assessment is one of the strategies for controlling the standard of healthcare services provided in healthcare facilities. The World Health Organization (WHO) recommends all healthcare professionals to have necessary competencies. In Ethiopia, the Health Sector Transformational Plan-II (HSTP-II) states competency assessment of all graduates before joining the health workforce as one of the strategic initiatives.

The Ministry of Health (MoH) launched the Ethiopian Health Professionals Licensing Examination (EHPLE) for undergraduates in 2019. The Health and Health-related Institutions and Professionals Regulatory Lead Executive Office (HHrIPR-LEO) of the Ministry of Health was given a mission to implement the ministry's objective to achieve competency-related goals. It has the responsibility to ensure that the EHPLE meets technical, professional, and legal standards, and to protect the health, safety, and welfare of the public by assessing candidates' abilities to practice competently.

Currently, the exam is given for 13 health professions (Medicine, Nursing, Public Health, Pharmacy, Medical Laboratory Science, Anesthesia, Midwifery, Dental Medicine, Medical Radiology Technology, Environmental Health, Psychiatric Nursing, Pediatric and Child Health Nursing, and Emergency and Critical Care Nursing). Since its introduction until February 2024, a total of 166293 examinees took the exam in 14 rounds.

### **1.2. The Rationale of EHPLE**

One of the critical functions of the MoH is to guarantee the efficiency, quality, and equity of healthcare delivery and to protect the public from any undesirable consequences in healthcare delivery practices. As professionals' competence is a significant determinant of the quality of health, evaluation of health professionals' competence has now been given due attention. The licensing examination for health professionals serves as a crucial step to ensure that individuals entering the field meet specific competency standards. The sole aim of the competency assessment is to safeguard public health by verifying that health professionals have the minimal basic knowledge, attitude, and skill required to provide safe and effective care.

Licensing exams act as a preventive measure, ensuring that only competent professionals join the health workforce, which, in turn, contributes to reducing the occurrence of medical errors and enhancing overall patient safety. By setting standards through examinations, regulatory bodies strive to minimize the risk of medical errors caused by incompetence.

## 2. Key processes of EHPLE

EHPLE involves several key processes to ensure the quality and reliability of the examination.

### 2.1. Registration of candidates

EHPLE has a mandatory online registration system for both new and repeat candidates, which can be found at [www.hple.moh.gov.et](http://www.hple.moh.gov.et)

Please note these important notes during registration.

#### New Test Takers:



- The list of eligible candidates from governmental and private Higher Education Institutions (HEIs) will be sent from Ministry of Education (MoE) to MoH and uploaded to the online registration system by MoH.
- Once the name of the candidate is uploaded to the system and registration has opened for the current exam round, the candidate must register at [www.hple.moh.gov.et](http://www.hple.moh.gov.et) by uploading the necessary documents listed below.
  - ✓ a scanned original or temporary degree
  - ✓ a scanned government-issued ID, passport, driving license, or any other legal ID
  - ✓ a passport-size photo of the candidate
  - ✓ For international candidates:
    - Equivalence document from ETA
    - Completing an externship attachment according to assignment by the regulatory body
    - Externship attachment completion letter

#### Repeat Test Takers:



- Since the information about re-exam candidates already exists in the system, the candidate should register by directly going to [www.hple.moh.gov.et](http://www.hple.moh.gov.et). There is no need for re-exam candidates to upload their documents.

#### Both new and repeat candidates:



- After completing the registration, the candidate must download and print the admission paper by logging into his/her account using his/her email address and password
- The candidate can change the exam center by logging into his/her account only during the registration period
- Once an examinee has selected his/her exam center during the registration period, an application for center change will not be allowed

## 2.2. Task Analysis

The first step of exam development involves conducting a comprehensive task analysis study, which identifies the tasks, knowledge, skills, and abilities required from a junior undergraduate professional in the specific profession. The analysis is typically done through surveys, interviews, or observations of practitioners in the actual work environment, as well as through the Delphi method with subject matter experts.

## 2.3. Exam Blueprint

Based on the task analysis findings, a test blueprint is created that outlines the content areas to be covered in the examination and the weight or emphasis given to each area. This ensures that the exam reflects the key competencies and knowledge needed for competent practice in that specific profession. Blueprint or test specification is the matrix or chart that shows the number and type of test questions represented across the topics in the content area, consistent with the learning outcome and relative weight of the test given to each content area. The blueprint also identifies the percentage weighting of cognitive dimensions as the level of competence tested in each knowledge domain.

Key components of a blueprint are:

- Domain
- Sub-domain
- Content
- Task
- Process
- Learning outcome
- Assessment methods
- Assessment tools/instrument (test format)
- Relative emphasis (in percentage)

## 2.4. Item Development

The items are developed following specific guidelines to ensure clarity, relevance, and fairness. Subject matter experts with experience in the field are selected from HEIs to develop test questions (items) that align with the test blueprint. The exam questions will focus mainly on “knows how” according to the competency level of the Miller's pyramid. The items are produced in a secure location on designated computers that are free from internet connectivity. The items are scenario-based and constructed with stem, lead-in, and four options/alternatives. All items will have a single-best-answer type of Multiple Choice Question (MCQ) that addresses the learning outcome defined in each content area. Standard text books, updated guidelines, and standards are used as reference materials.

## 2.5. Item Review

Once developed, the items undergo a rigorous review process by item reviewers. The main purpose of the exam review process is to evaluate content relevance, technical accuracy, clarity, and sensitivity related to culture and religion. More experienced subject matter experts as well as psychometric experts will do the review to ensure the items meet psychometric standards. Subject matter experts shall review the items to confirm that they are accurate, clearly stated, and correctly

keyed using the checklist. Psychometric experts shall reviews the items to ensure that they are not technically flawed. They also work on editorial review to check grammar, punctuation, and spelling errors. This helps ensure the reliability and validity of the items.

## 2.6. Standard setting method

The standard setting or cut-off point of the EHPLE is determined using the Modified-Angoff method, which is one of the most widely used and legally defensible standard setting approaches to set a cut-off point for high-stake competency examinations.

The method involves a panel of subject matter experts who evaluate each test question and then estimate the probability that a minimally competent examinee would answer each test item correctly. The average of the experts' predictions for a test question becomes its predicted difficulty. The average of the predicted difficulty values across all items on a test is the recommended cut-off point. This point indicates the minimum level of knowledge and skill required to pass.

## 2.7. Exam Administration

The EHPLE is administered following established protocols and guidelines. Proper test administration procedures, appropriate security measures, and appropriate consideration for test-takers who need special support will be applied during exam administration at exam centers. The exam is administered in selected HEIs nationally, where candidates can choose based on their convenience at the time of registration. The exam schedule will be posted ahead of time on the MOH website and official Facebook page. Examinees who have a valid admission paper are eligible to sit for the exam. The mode of exam administration is computer-based testing.

## CAUTIONS

- Candidates are allowed



- Attend the orientation session in order to sit for the exam
- Arrive at the exam center on time
- Bring a legal ID and admission paper
- Complete the exam within the allotted time frame

➤ Candidates are **NOT** allowed



- To bring reference materials, blank paper, or notes into the exam center
- To smoke, eat, or drink in the exam room
- To bring mobile phones, tablets, smart watches, camera devices, eyeglasses, calculators or any type of electronic device into the exam center
- To bring their personal belongings to the exam center
- To bring weapons and sharp materials into the exam center
- To give or receive assistance to or from other candidates during the examination

### 2.8. Scoring and post exam analysis

Once the exam is completed, the scoring process begins. The exam scoring process involves computerized scoring using software.

Post-exam analysis is the process of analyzing examinees' responses to individual test items in order to assess the quality of the items and the exam as a whole. This phase helps to identify any poorly performing items that may need revision or removal from the exam. The item difficulty index, discrimination index, and reliability coefficient are elements of exam analysis.

### 2.9. Result notification and appeal management

After scoring and analysis, individual score reports are generated and provided to examinees through the website [www.hple.moh.gov.et](http://www.hple.moh.gov.et). After result notification, examinees can submit their appeal through phone or email within 10 working days after result notification.

### 2.10. Licensing

The list of examinees who passed the exam will be sent to regional and city administration regulatory bodies. A license is obtained from the regional/zonal health bodies where he/she permanently lives.

Requirements for professional licensing are:



- Passing the EHPLE
- Original or temporary degree
- Educational documents (10th and 12th certificates)
- Medical certificate
- Government issued ID
- Additional prerequisites based on the requirements of regional regulatory bodies

### 3. Exam Framework

The key broader professional roles, also known as domains or main knowledge areas serve as a building framework for the licensing examination content for Public Health professional. The domains are further divided into discrete professional attributes that constitute sub-units (also referred to as sub-domains) defining the professional identity of Public Health profession Tasks specifying the performance level of each sub-domain serve as the final characteristic of the professional duties on which the licensing exam focuses.

The contents of the licensing examination are presented below, structured into key roles (domains), sub-units (sub-domains), and tasks. The examination emphasis for each domain and sub-domain, out of the total 100% questions, is indicated in brackets.

#### Key professional roles/ domains

- Patient Care (53.0%)
- Scholar (9.0%)
- Professionalism (7.0%)
- Leadership and management (11.0%)
- Health promotion and disease prevention (20.0%)

#### Key role/ domain 1: Patient care roles/ domains (53.0%)

**Description:** This domain encompasses the professional roles of Public Health professional in the provision of high-quality, safe, and patient-centered care within their scope of practice. The provision of up-to-date, ethical, and resource-efficient care requires the application of integrated knowledge of biomedical, clinical, behavioral, and social sciences. As patient care providers, Public Health Professionals shall collect and interpret information, make clinical decisions, carry out diagnostic and therapeutic interventions, and evaluate interventions. To demonstrate competence in this domain, candidates shall apply such integrated knowledge in the following sub-areas:

- Internal Medicine (12.0%)
- Surgery (9.0%)
- Pediatrics (9.0%)
- Gynecology and Obstetrics (10.0%)
- Dentistry (2.0%)
- Ear Nose and Throat (3.0%)
- Psychiatry and Mental Health (3.0%)
- Ophthalmology (2.0%)
- Dermatology (3.0%)

### **Key role/ domain 2: Scholar (9.0%)**

**Description:** This domain encompasses the professional roles of Public Health profession in generating and utilizing scientific data to improve the health and well-being of Ethiopians and broaden their scientific knowledge within the healthcare system and community setting. Providing this service requires the application of integrated knowledge in research methods, measurements of health and disease, biostatistics, epidemiology, clinical audit, evidence-based practice, and research ethics. To demonstrate competence in this domain, candidates must possess applied knowledge in planning, problem identification, data collection, analysis, interpretation, report write-up, and dissemination of research outputs.

### **Key role/ domain 3: Professionalism (7%)**

**Description:** This domain encompasses the professional commitment of Public Health professional to promoting the health and well-being of individuals and society through adhering to ethical standards, maintaining personal integrity, and upholding high standards of competence in all areas of practice. To exhibit competence in this domain, candidates must possess applied knowledge of ethical principles, medicolegal practices, effective communication, accountability to the profession and society, maintenance of professional excellence and personal health, and professional values such as compassion, respect, integrity, honesty, altruism, and humility. To demonstrate competence in this domain candidate shall possess essential applied knowledge of the following sub-areas.

- Professional ethics and medico-legal practice (3.0%)
- Principles of professionalism (2.0%)
- Communication and Collaboration (2.0%)

### **Key role/ domain 4: Leadership and management (11.0%)**

**Description:** This domain encompasses the professional roles of Public Health professional in envisioning a high-quality healthcare system through self-awareness, active participation in healthcare teams, leading teams, and managing health systems. Providing this service requires the application of integrated knowledge in continuous quality improvement, effective health system leadership, management, and healthcare ethics. To demonstrate competence in this domain candidate shall possess applied knowledge to plan, organize, staff, lead, execute, monitor, and control healthcare resources and activities.

### **Key role/ domain 5: Health promotion and disease prevention (20.0%)**

**Description:** This domain encompasses the professional roles of Public Health professional in enhancing the health and well-being of patients, communities, and the larger populations they serve through health advocacy, disease prevention, health promotion and the promotion of health equity. Providing this service takes an integrated understanding of determinants of health, health informatics, epidemiology, communicable disease control, and health education. To demonstrate competence in this domain candidate shall possess essential applied knowledge of the following sub-areas.

- Community diagnosis (10.0%)
- Community based intervention (10.0%)

*Table 1: Exam Content For Public Health Profession*

<b>Domain 1: Patient Care</b>	
<b>Sub-domain 1.1: Internal Medicine</b>	
<b>Content</b>	<b>Sub-content</b>
Infectious diseases	TB
	HIV
	Protozoal infections
	Helminths
	Acute febrile illnesses
Gastrointestinal system	Tetanus
	Peptic ulcer disease
	Infectious diarrheal diseases
Respiratory system	Liver diseases
	Respiratory infections
	Pleural effusion
Cardiovascular system	Asthma and COPD
	Heart Failure
	Rheumatic fever and RHD
	Infective endocarditis
Nephrology	Hypertension
	Ischemic heart disease
	Nephritic and nephrotic syndrome
Neurology	CKD
	UTIs
	CNS infections
	Seizure disorders
	Cerebrovascular accident
Rheumatology	Headache
	Paraparesis/paraplegia
Endocrinology	Rheumatoid arthritis
	Gout
	DM
Hematology	Hyperthyroidism
	Hypothyroidism
Emergency medicine	Anemia
	Shock
<b>Sub-domain 1.2: Surgery</b>	
<b>Content</b>	<b>Sub-content</b>
General surgery	Wound, wound management and surgical site infections
	Thyroid surgery
	Benign and malignant breast conditions
GI surgery	Hernias
	PUD and its complications
	Acute abdomen
	GI malignancies
	Perianal conditions
Urologic surgery	Urinary tract stones
	Acute and chronic urinary retention
	Urologic Emergencies (Testicular torsion, Epididymo-orchitis)

	Acquired and congenital diseases of the male genitalia (Hydrocele, Undescended testis)
	Urologic Traumas
	Urologic malignancies
Neurologic surgery	Head injury and raised ICP
Orthopedics & Traumatology	Bone and joint infections (osteomyelitis, septic arthritis)
	Fracture, dislocation and compartment syndrome
	Bone tumors
	Spinal Cord Injury
Cardiothoracic surgery	Chest injury (Hemothorax, Pneumothorax, Rib fracture)
Plastic surgery	Burn injury
Vascular surgery	Acute limb ischemia
	Varicose veins
Pediatrics surgery	
<b>Sub-domain 1.3: Gynecology &amp; Obstetrics (GYN/OBS)</b>	
<b>Content</b>	<b>Sub-content</b>
Normal pregnancy	
Early pregnancy complications	
Late pregnancy complications	
Normal labor	
Abnormal labor	
Normal and abnormal puerperium	
Menstrual cycle and its abnormalities	
Gynecologic infections	
Family Planning	
Infertility	
Gynaecologic Oncology	
Pelvic organ prolapse and Urinary incontinence	
<b>Sub-domain 1.4: Pediatrics and Child health</b>	
<b>Content</b>	<b>Sub-content</b>
Neonatology	Classification and care of new born
	Neonatal resuscitation
	Prematurity and Low birth weight (LBW)
	Hemorrhage
	Congenital infections
	Neonatal tetanus
	Jaundice
	Congenital malformations
	Respiratory distress in newborns
	Hypothermia and hypoglycemia
	Neonatal seizure
	Necrotizing enterocolitis(NEC)
	Preventive Pediatrics
Infectious diseases	Diarrheal diseases
	Urinary tract infection
	Tuberculosis
	HIV/AIDS
	Acute febrile illness (AFI)
Gastrointestinal disorders	Malaria
	Protozoal diseases/helminthes
	Acute hepatitis

Cardiology	Congestive heart failure
	Congenital heart diseases
	Rheumatic heart disease and acute rheumatic fever
Respiratory Disorders	Upper respiratory tract infection (URTIs)
	Community acquired pneumonia
	Wheezing, bronchiolitis and bronchitis
Nephrology	Nephrotic/Nephritic syndrome
	Acute kidney injury
Neurology	Seizure disorders
	CNS infections
Hematology	Anemia
	Leukemia
Malnutrition	Protein energy malnutrition
	Micronutrient deficiency
Growth and development	Principles of development
Pediatrics emergencies	Upper airway obstruction (Epiglottitis...)
	Shock
	Coma
Allergy and immunology	Bronchial asthma
Endocrinology	Hypoglycemia beyond neonatal age
	Diabetes mellitus
<b>Sub-domain 1.5: ENT (Ear, Nose and Throat)</b>	
<b>Content</b>	<b>Sub-content</b>
Disease of external and internal ear	Otitis Externa
	Acute otitis media and chronic otitis media
	Foreign bodies
Disease of nose	Acute rhino sinusitis
	Epistaxis
Pharynx and Salivary gland disorders	Acute and chronic tonsillitis
	Adeno-tonsillar Hypertrophy (ATH)
	Peritonsillar abscess
	Deep neck space infection(Ludwig’s angina, submandibular abscess)
<b>Sub-domain 1.6: Dentistry</b>	
<b>Contents</b>	<b>Sub-content</b>
Basics of dentistry	Nomenclature
Diseases of the hard tissues of the tooth	Dental caries
Diseases of the dental Pulp	Pulpitis
Periodontal disease	Gingivitis
	Periodontitis
Tooth extraction	Tooth extraction
Dental trauma	Dental trauma
Oral health care	Preventive Dentistry
<b>Sub-domain 1.7: Psychiatry</b>	
<b>Contents</b>	<b>Sub-content</b>
Anxiety disorders	Generalized anxiety disorder(GAD)
	Phobias
	Panic disorder
Trauma and stress relate disorders	Post-traumatic stress disorder(PTSD)
Obsessive-Compulsive and related disorder	Obsessive-Compulsive disorder(OCD)
Psychiatric Emergencies	Suicide

Substance related and addictive disorders	Dependency and withdrawal states for various drugs (alcohol, etc..)
Psychotic Disorders	Schizophrenia
Mood disorders	Major depressive disorder(MDD) Bipolar disorders
<b>Sub-domain 1.8: Ophthalmology</b>	
<b>Contents</b>	<b>Sub-content</b>
External Eye diseases	Orbital cellulitis
Red eye	Conjunctivitis
Community Ophthalmology	Cataract
	Trachoma
	Vitamin A Deficiency
Eye injuries	Chemical burn
	Blunt and penetrating eye ball injuries Foreign body
Thyroid eye disease	
<b>Sub-domain 1.9: Dermatology</b>	
<b>Contents</b>	<b>Sub-content</b>
Bacterial infection of the skin	
Superficial Fungal infections of the skin	
Viral infections	
Parasitic infections	
Eczemas	
Acne	
<b>Domain 2: Health Promotion and Disease Prevention</b>	
<b>Sub-Domain 2.1: Community Diagnosis</b>	
<b>Content</b>	
Nutritional assessment methods	
Behavioral models	
Institutional health assessment	
Disaster preparedness	
Environmental health assessment	
Child and Maternal health assessment	
Public Health Screening	
Surveillance	
Outbreak investigation and management	
<b>Domain 3: Scholar</b>	
<b>Sub-domain 3.1: Research and evidence based practice</b>	
<b>Content</b>	
Problem identification	
Setting objective	
Study design	
Sampling techniques	
Sampling procedure	
Sample size determination	
Data collection tools	
Data collection method	
Data quality assurance	
Ethical consideration	

Data summarization and presentation
Measure of morbidity
Hypothesis testing
Measure of association
<b>Domain 4: Leadership and management</b>
<b>Content</b>
Concepts and principles of management
Management function
Types of planning
Steps of planning
Organizing
Staffing
Leading
Decision making
Resource management
Primary health care(PHC) and Ethiopian health policy
Teamwork
Health care financing
Monitoring and Evaluation
<b>Domain 5: Professionalism</b>
<b>Sub-domain 5.1: Professional ethics and medico-legal practice</b>
<b>Sub-domain 5.2: Principles of professionalism</b>
<b>Sub-domain 5.3: Communication and collaboration</b>

## Sample questions

1. A 45-year-old female patient comes to a health center with a complaint of productive cough with scanty whitish sputum of one-month duration. She claimed that the cough exacerbates during night time and gets complete relief when she uses Salbutamol puff. She also has chest tightness and pain, and shortness of breath. Her pulse rate is 92/min, respiration rate are 24/min, and temperature is 36.40C. Respiratory examination shows that there is scattered wheeze all over the chest.

What is the most likely clinical diagnosis of this patient?

- (A) Pneumonia (C) Bronchitis  
(B) Tuberculosis (D) Asthma

**Answer Key:** The answer is **D**

**Explanation:** The patient's symptoms of chest tightness and pain, nocturnal cough which relieves with Salbutamol use, and the presence of wheeze are suggestive of asthma. The characteristic symptoms of asthma are wheezing, dyspnea, and coughing, which are variable, both spontaneously and with therapy. Symptoms may be worse at night and patients typically awake in the early morning hours. Typical physical signs are inspiratory, and to a greater extent expiratory wheeze throughout the chest. The diagnosis of asthma is usually apparent from the symptoms of variable and intermittent airways obstruction, but must be confirmed by objective measurements of lung function. On the other hand, Pneumonia (option A), Tuberculosis (option B), and Bronchitis (option C), cannot be the most likely clinical diagnosis in this case as they have different symptoms.

2. A 31-year-old male patient comes to a clinic with complaints of fever and abdominal pain of five days duration. The fever has a characteristic of stepladder increment. He also has headache, joint pain and anorexia. His pulse rate is 64/min, temperature is 39.60C, blood pressure is 120/70mmHg and respirations rate are 20/min. On examination, there is no remarkable systemic finding. His CBC result shows WBC count of 2500/mm<sup>3</sup>, and hematocrit level of 43%.

What is the most likely diagnosis of the patient?

- (A) Typhoid fever (C) Cerebral malaria  
(B) Relapsing fever (D) Bacterial meningitis

**Answer Key:** The answer is **A**

**Explanation:** The patient's symptoms of high grade fever with stepladder increment, abdominal and joint pain, headache, anorexia, and presence of relative bradycardia and leucopenia are suggestive of typhoid fever (enteric fever), which is a systemic disease caused by dissemination of *S. Typhi* or *S. Paratyphi*.

3. A 28-year-old female comes to an OPD with recurrent left side headache of three-day duration. She had similar history of headache for most of the days of the month for the last two years. The pain worsens when she works over night at duty hours. She also has nausea, vomiting and fear of light accompanying the headache. Her mother has also similar complaints. Her vital signs are in the normal range. There is no pertinent physical finding on examination

What is the most likely diagnosis of the patient?

- (A) Cluster headache (C) Traction headache  
(B) Tension headache (D) **Migraine headache**

**Answer Key:** The answer is **D**

**Explanation:** The patient's symptoms, recurrent left sided headache which accompanied by nausea, vomiting and fear of light, the presence of similar illness for the past two years, and the presence of family history are more suggestive of migraine headache unlike the other primary headaches. The other options (A, B, & C) cannot be the most likely diagnosis of the patient in this case. In the case of tension and traction headaches (options B & C), the headache is bilateral and do not accompany by nausea, vomiting or fear of light against their diagnosis. In the case of cluster headache (option A), the pain is retro-orbital and characterized by its periodicity.

4. A 52-year-old female, who was working standing seven-hour per-day for the last three-years, comes to a clinic with a complaint of leg pain of one-week duration. She also has aching and heaviness over both legs. On musculoskeletal examination, there is bluish colored, multiple tiny threads like distended veins over both legs.

What is the most appropriate initial management for the patient?

- (A) Compression stocking (C) Surgical venous stripping  
(B) Multiple venous ligations (D) Endovenous laser ablation

**Answer Key:** the answer is **A**

**Explanation:** From the history, the patient was working with prolonged standing, leg pain; aching and heaviness of both legs and the presences of tiny threads like dilated veins and bluish discoloration suggest the diagnosis of varicose vein. The most appropriate initial management is compressive elastic stocking or bandage. For this patient, the history and physical examination findings do not suggest the need of surgical intervention at this stage.

5. A 28-year-old known RVI male patient on HAART comes to a clinic with a complaint of a painful swelling around his anus of four days duration. He also has fever, chills and rigor. On examination, there is 3x2cm sized very tender, hot to touch and smooth surfaced mass on lateral side of anal verge. When it is tapped, frank pus is aspirated.

What is the most appropriate management for the patient?

- (A) Incise and drain the pus, and then put on broad spectrum antibiotics
- (B) Put him on oral broad spectrum antibiotics and send him home
- (C) Needle aspiration and oral broad spectrum antibiotics
- (D) Give potent anti-pain and send him home

**Answer Key:** The answer is A

**Explanation:** The patient's symptoms, painful swelling around the anus and the presence of tender, hot to touch mass on the lateral side of the anal verge and the tap revealing frank pus are suggestive of perianal abscess. The appropriate management for perianal abscess is incision and drainage of the abscess to prevent severe necrotizing infections. Antibiotics would not be recommended in all perianal abscesses and in most of the cases incision and drainage would suffice. But, for this patient the presence of immunocompromisation (known RVI on HAART) and systemic manifestations (fever, chills and rigor) indicate the need for initiation of broad spectrum antibiotics in addition to incision and drainage of the abscess. Therefore, the most appropriate management for the patient is incising, draining, and then putting on broad spectrum antibiotics.

6. A three-month-old male infant come with his mother to a health center with poor feeding, failure to thrive and sweating while feeding. Physical examination is remarkable for cyanosis, tachypnea, tachycardia, a gallop rhythm and hepatomegally.

What is the most appropriate initial management of the infant?

- (A) Put on oxygen and refer
- (B) Put on antibiotic and refer
- (C) Start diuretics and send home
- (D) Start antibiotics and send home

**Answer Key:** The answer is A

**Explanation:** From the symptoms and physical findings, the age of the infant, the presence of poor feeding, failure to thrive & sweating while feeding, cyanosis, tachycardia, tachypnea, gallop and hepatomegally are suggestive of cyanotic heart disease with respiratory distress. The most appropriate initial management is support the infant with oxygen until he gets definitive managements. The definitive managements will be medical or surgical. Therefore, the most appropriate immediate step for the infant at the health center level is to put on oxygen and refer for the definitive management.

7. A two-year-old child is presented with cough of one-day duration and worsening of respiratory difficulty. The family reported that the child was playing with other children in the compound before the incident and then had choking episode. On examination, vital signs are in the normal range and wheezing on the right lung field.

What is the most appropriate initial step in the management of this case?

- (A) Foreign body removal (C) Antibiotics  
(B) Intranasal oxygen (D) Steroids

**Answer Key:** The answer is A

**Explanation:** From the symptoms and the physical findings, the presence of cough, worsening of respiratory difficulty, choking episodes and localized wheeze on the right lung field supports the diagnosis of foreign body aspiration than other possible causes of wheezing. The removal of the foreign body is the most appropriate management to prevent the subsequent complications associated with foreign body aspiration. Intranasal oxygen can be the answer but the vital signs are in the normal range and the child is not in need of intranasal oxygen support. Antibiotics are not recommended in a child with foreign body aspiration unless the foreign body results localized infections and there are no symptoms. Steroids are mostly used for the management of croup (laryngotracheobronchitis) after the child is presented with upper airway obstructions than for foreign body aspiration.

8. A 16-year-old female student was brought by her mother to the gynecologic OPD with a complaint of pain during menses of one-year duration. The pain is severe and subsequently she missed school many times. She claimed that she visited different health facilities for her complaint but no problem was identified. Physical examination and investigations were all unremarkable.

What is the most likely diagnosis for the patient?

- (A) Endometriosis (C) Secondary dysmenorrhea  
(B) Primary dysmenorrhea (D) Membranous amenorrhea

**Answer Key:** The answer is B

**Explanation:** From the history the client's age, the presence of cyclic pain during menses & the absence of any underlying problem and the unremarkable findings from the physical and investigations support the diagnosis of primary dysmenorrhea. The clinical presentation of primary and secondary dysmenorrhea will be similar but usually clients with secondary dysmenorrhea have underlying pathology such as endometriosis, adenomyosis, PID that results the symptoms of secondary dysmenorrhea. Amenorrhea is the absence of menses but the client already has menses, hence membranous amenorrhea cannot be the answer

9. A 22-year-old G-II P-I woman presented to a labor ward at 38 weeks of gestation with gush of fluid per vagina of two hours duration. She has associated lower abdominal pain that comes every three minutes. Her blood pressure was 100/70mmHg, pulse rate was 86/min and temperature was 37°C. FHB was 144/min. Pelvic examination revealed cervical dilatation of 3cm and station of -1 and adequate pelvis. Her laboratory results were within a normal range.

What is the most appropriate management for this woman of the lady?

- (A) Admit her and follow labor  
(B) Augment her with Oxytocin  
(C) Encourage her to ambulate  
(D) Start her on Antibiotics

**Answer Key:** The answer is **A**

**Explanation:** From the history, the woman is pregnant at her 38 weeks of GA presented with gush of fluid per vagina and associated lower abdominal pain, which comes every 3 minutes, indicating the rupture of the membrane and beginning of labor. As well, on physical examination the cervical dilatation of 3cm and station of -1 reveals she is in latent first stage of labor. The presence of maternal and fetal normal vital signs and the adequacy of the pelvis show the labor is normal. The most appropriate management is admitting her and follows labor.

10. A 40-year-old Gravida VI Para V woman, whose gestational age is 39 weeks, is presented to health center with complaints of lower abdominal and back pain of six hours duration. On physical examination, vital signs are in the normal range, had 3 mild contractions and FHB was 145/min. On per-vaginal examination, cervix was 3 cm dilated, position was left occiput-transverse, station was -1 and membrane was intact.

What is the most likely diagnosis of this woman?

- (A) Third stage of labor  
(B) Second stage of labor  
(C) Active first stage of labor  
(D) Latent first stage of labor

**Answer Key:** The answer is **D**

**Explanation:** From the history and physical examination, the lower abdominal & back pain of six hours and the presence of 3 mild (stays for 20-40 seconds) uterine contractions, indicate the onset of labor. The per-vaginal examination also reveals cervical dilatation of 3 cm which is latent first stage of labor.

11. A nine-month-old infant comes with his mother for a complaint of cough and fast breathing of one-week duration. The infant has no previous immunization history. After a thorough evaluation, he was diagnosed with pneumonia.

What is the most appropriate intervention to prevent recurrence of the disease?

- (A) Zinc supplementation (C) TT immunization  
(B) Measles vaccination (D) Antibiotics

**Answer Key:** The answer is **B**

**Explanation:** - From the history, the child is nine-months-old with cough and fast breathing supports the diagnosis of pneumonia. The child also unvaccinated or no history of immunization since birth, which will contribute for development of pneumonia or recurrent pneumonia. According to the expanded program for immunization / EPI/, most of the vaccines used for pneumonia prevention directly or indirectly. Out of the ten vaccines, which are given for children according to the Ethiopian EPI schedule, BCG, pneumococcal conjugated vaccine (PCV), pertussis, diphtheria and measles vaccines contribute for the prevention of pneumonia. Therefore, the child unvaccinated for measles has a high risk for recurrent disease or pneumonia.

12. A farmer working at the edge of a river experienced repeated insect bite by insects coming from the river. Two weeks later, he became febrile and started developing papules, which then changed to ulcer.

What is the most likely vector that transmitted this disease?

- (A) Black fly (B) Sand fly (C) Flesh fly (D) Fruit fly

**Answer Key:** The answer is **B**

**Explanation:** From the history, the farmer is working at the edge of the river, which is one of the breeding sites for sand flies. The presence of repeated insect bite and the development of fever and papular lesions which later change to ulcer favors the diagnosis of cutaneous leishmaniasis, which is transmitted by the bite of a vector sand fly.

13. While performing physical examination, a health officer found small tumor on the patient's left lower extremity. The procedure was on the next keeping exact order of patient flow. On the date of operation, the health officer did incision and removes the tumor without patients consent.

What ethical principle did the health officer violated?

- (A) Non-Maleficence (C) Autonomy  
(B) Beneficence (D) Justice

**Answer Key:** The answer is C

**Explanation:** Respect for autonomy is one ethical principle where clients exercise their own self-determination. In the scenario the client was not given a choice to choose between treatment options and the procedure done without consent. Therefore, this is a clear breach of patient autonomy. On the other hand, non-maleficence (Choice A) is an act of avoiding harm was not discussed in the scenario directly. In the same manner, Beneficence (choice B), which is also an act of doing for benefit of patient was not discussed directly in the scenario. Again, justice (choice D) is not violated since all patients were treated in their order of arrival.

14. A manager at a district health office delegate's position for different departments under his scope of management, and he applied his own leadership style for the success of his organization. For this, he maintains strong control over people within each department and focuses on tasks rather than people and he makes all the decisions by himself and communicates the decision for his subordinates.

What is the most appropriate leadership style is followed by a manager in this case?

- (A) Participatory (C) Leizas-fair  
(B) Democratic (D) Autocratic

**Answer Key:** The answer is D

**Explanation:** The autocratic leader maintains strong control over people in the group. This control may be paternalistic leadership or it may be dictatorial, with the complete disregard for the needs and feelings of group members. Authoritarian leaders unlike participatory and democratic leaders give orders and expect group members to obey these orders. Directions are given as commands, not suggestions. This approach generally results in passive resistance from team members and requires continual pressure and direction from the leader in order to get things done.

15. A spontaneous rupture of unscarred uterus in a primigravid patient is extremely rare clinical condition. However, a 34-year-old primigravid woman came to an emergency OPD with sudden acute abdomen. An emergency laparotomy was performed and a uterine rupture was found as the cause of the event.

What is the most appropriate study design for this scenario?

(A) Case series

(C) Case control

(B) Case report

(D) Cross sectional

**Answer Key:** The answer is **B**

**Explanation:** Case report is detail reporting of unusual/rare events on the single case by one or more physicians. In the above scenario we have the information that indicates unscarred uterus in a primigravid patient which is extremely rare clinical condition and observed on this woman. Hence, case report is the best answer for the scenario. But, choice A is detail reporting on a single case with number (5-12) of individuals, choice C is for identifying the risk factors of disease from previous exposure status, and choice D is a method of studying the prevalence of diseases.

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