

National Authority for Quality Assurance and Accreditation in Education

National Academic Reference Standards (NARS)

Bachelor Degree of Medicine

May 2008

Preface

Acknowledgement

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Contents

Subject	Page
Preface	
Work Methodology	
Introduction	
National Academic Reference standards	
Glossary	
References	

Preface

This is the second edition of the National Academic Reference Standards for Under Graduate Medical education (MNARS). The (MNARS) represent general expectations about the standards for the award of Bachelor Degree in Medicine in Egypt. They also represent the minimum academic quality requirements which the government and the National Authority for Quality Assurance in Education regards as appropriate and reasonable in order to protect the interests of the students, the reputation of individual faculties, and the community as a whole.

These standards have been drawn up by a diverse group which included medical academics representing a wide variety of Egyptian Universities, members of the sector committee of the supreme council of Universities, a representative of the Medical Syndicate, and members of the Ministry of Health and Population and Army Hospitals. The standards have originated from many international references and it has been confirmed that the Egyptian standards do conform to the international ones.

Work Methodology

- NARS was established based on the one that have been developed and published by The National Committee for Quality Assurance and Accreditation in conjunction with the Medical Sector committee in July 2007
- These standards had been designed according to all available international references of the Bachelor Degree of Medicine
- The NAQAAE had nominated a developing team to review the first edition of NARS and identify a wide spectrum of stakeholders to comments and feedbacks on these standards
- These standards has been modified according to the comments of a large group of stakeholders including academics from various faculty of medicine, the planning and development committee of the medical sector committee, The medical Egyptian Medical Syndicate, representatives nominated from the Ministry of health and population, the directors of different private hospitals and many students.
- The methodology of obtaining the feedbacks was through interview , focus group discussion and presentation in various faculty of medicine conferences
- The NAQAAE will post these standards for one month on the website www.naqaae.org.eg
- NAQAAE will disseminate these standards on its website and will send it to the whole Academic Community of Medicine and to all faculties of Medicine in Egypt
- The Sector committee may like to facilitate to the Faculties of medicine to realize these standards through updating or changing bylaws to encourage faculties of medicine to implement these standards

Introduction

Background

1. The National Academic Standards have been developed in order to serve as an external reference for designing and upgrading the undergraduate educational program of faculties of medicine. They also represent general expectations about the standards for the award of Bachelor Degree in Medicine (MBBCh) and articulate the attributes and capabilities that those possessing such qualification should be able to demonstrate.
2. The National Academic Reference Standards of the MBBCh degree includes expressions of the professional/employment related abilities that graduates in medicine would be expected to have developed during their higher education including associated practice based experiences.
3. These standards represent the minimum academic quality requirements which the government regards as appropriate and reasonable in order to protect the interests of the students, the reputation of individual faculties, and the community.
4. These standards have been developed by a group of medical academics representing a wide variety of Egyptian Universities, Medical Sector Committee, a representative of the Medical Syndicate, Ministry of Health and Population ,Army Hospitals private hospitals and students.
5. The standards are not a curriculum or a syllabus.
6. The role of NAQAAE is to develop, review and modify the national academic reference standards when required.
7. The role of the medical sector committee is to, participate in the development, dissemination and implementation of the NARS

Role of Faculties of Medicine

8. The role of faculties is to develop their own standards based on the relevant external reference points, guarantee the approval of NAQAAE if their standards are not equal or exceed the threshold of National Academic Reference Standards and ensure that their own standards and their program design follow the regulatory frameworks and bylaws of the sector committee.
9. Each faculty of medicine should consider additional evidence they may wish to present under each of the standards and make this clear in their self-evaluation reports and during external audit.
10. Every faculty of medicine should ensure that their academic standards are in compliance with their mission, the faculty members approve the academic reference standards and their students achieve the academic standards and outcomes.
11. Every faculty of medicine should clearly define the program and course specifications including aims and graduate profile.
12. Every faculty of medicine should have a plan to implement successfully the academic reference standards and should have a means to secure and sustain the use of these standards.
13. If any faculty of medicine develops program Intended Learning Outcomes that are different from the National Academic Reference Standards, it should be stated in its mission. For example, it may have a distinctive mission or unusual student intake, or it might be using alternative external reference points that are regarded as more relevant to the needs of its graduates and other stakeholders.

Recommendations to achieve NARS

14. **Curriculum Integration.** Traditionally the medical course was divided into a pre-clinical course covering the sciences basic to medicine and the clinical course covering clinical instruction with some of the more applied medical sciences. Over the last two decades the division has been increasingly blurred and most courses now have horizontal and vertical integration. The

sector committee recommends that all faculties of medicine must imply some degree of integration according to their capabilities.

15. **Educational Strategies:** There are also different approaches to education across the medical schools. The curricula in most of the medical schools are predominantly subject based, whereas in few medical school is problem based. The sector committee confirms that all faculties of medicine must adopt new educational strategies within the next two years.

16. **Medical Education Center /Department:** In recent years there has been an increasing professionalism of medical education with most medical schools now having medical education center /departments. The sector committee invites all faculties of medicine to establish medical education departments or strengthen their medical education centers.

17. **Elective Courses:** Most of the medical schools use a compulsory core curriculum to all the students. The core curriculum provides the essential knowledge, understanding, clinical skills and professional attitudes which are required by any medical graduate in order that s/he may practice as a house officer house and commence postgraduate training. The elective courses became one of the essential international standards all over the world. The sectors committee encourages medical schools to acquire elective studies. The aim of the elective studies is stimulation of critical thinking; it should allow students to acquire research abilities and enhance their skills in collection, evaluation, synthesis and presentation of evidence. Elective studies also provide opportunity for study in depth and may extend beyond the traditional medical disciplines.

National Academic Reference Standards (NARS)

For Bachelor degree of Medicine (MBBCh)

Professional Information

1. Attributes of the Typical Graduate:

The Medical Graduate must:

- Work to maintain normal health, provide primary health care and deal with common health problems in the society.
- Be aware of the importance of a good doctor/ patient relationship, and work to establish and maintain it.
- Follow rules of medical ethics.
- Demonstrate appropriate communication, clinical and practical skills.
- Show appropriate attitudes and professionalism.
- Be prepared for life long learning.
- Be able to engage in post- graduate and research studies.
- Acquire basic administrative capabilities.

2. National Academic Reference Standards (NARS):

Students should be prepared to approach their medical practice acquiring sufficient knowledge of the basic and clinical sciences in an integrated manner, and an understanding of the underlying principles of scientific method. They must engage in lifelong learning to remain current in their understanding of the scientific basis of medicine.

On graduation, the graduates must possess all the competencies that enable them to carry out the duties of the house officers during the house officer year; after which they must possess the competencies essential for working as primary health care providers. Professional skills are acquired during the undergraduate education, and continue throughout the house officer year.

The medical school must ensure that before graduation the student will have demonstrated, to the satisfaction of the faculty, the knowledge and understanding, the intellectual, practical, professional attitude and behaviors, communication, general and transferable skills of the following:

2.1: Knowledge and Understanding:

2.1.01 Normal Human Body:

- a. Normal structure and function of the body (as an intact organism) and of each of its major systems.
- b. Molecular, biochemical, and cellular mechanisms which are important in maintaining the body homeostasis.
- c. Main developmental changes in humans and the effect of growth, development and aging on the individual and his family.
- d. Basics of normal and abnormal human behaviors.

2.1.02 Altered structure and function of the body and its major systems that are seen in various diseases and integrate it in clinical conditions.

2.1.03 Etiology, pathogenesis, clinical features, diagnoses and complications of common and life-threatening illnesses affecting the body and each of its major organ systems, presenting throughout the age spectrum.

2.1.04 Principles of management of common and life threatening illnesses including:

- a. Pharmacological and non pharmacological basics of therapy.
- b. Non invasive and invasive intervention.
- c. Basic pre- and post operative care.
- d. Pain relief and palliative care.

2.1.05 Population Health and Health Systems:

- a. The determinants of health, principles of disease prevention and early detection of common community health problems.
- b. Principle and organization of National Health Care System.
- c. Epidemiological principles of demography and biological variability.

- d. Principles of disease surveillance and screening.
 - e. Communicable disease control and health promotion.
 - f. Population-based approaches to health care services and their role in improving medical practice.
- 2.1.06 Basics of ethics, medico legal aspects of health problems, malpractice and common medical errors.
- 2.1.07 Basics of health and safety procedures during practical and clinical years

2.2-Intellectual Skills

- 2.2.01 Integrate basic anatomical, biochemical and physiological facts with clinical data.
- 2.2.02 Reason deductively in solving clinical problems:
- a. Recognize, define and prioritize problems.
 - b. Interpret, analyze, and evaluate information objectively, recognizing its limitations.
- 2.2.03 Use personal judgment for analytical and critical problem solving and seek out information.
- 2.2.04 Integrate the results of history, physical and laboratory test findings into a meaningful diagnostic formulation.
- 2.2.05 Construct appropriate management strategies for patients with common diseases, both acute and chronic, including medical, psychiatric, and surgical conditions.
- 2.2.06 Design an initial course of management for stabilization of patients with serious illnesses.

- 2.2.07 Classify factors that place individuals at risk for disease or injury, to determine strategies for appropriate response.
- 2.2.08 Retrieve, analyze, and synthesize relevant and current data from literature, using information technologies and library resources, in order to help solve a clinical problem based on evidence (EBM).
- 2.2.09 Recognize and cope with uncertainty by:
- a. Accepting that uncertainty is unavoidable in the practice of medicine.
 - b. Reacting to situations of uncertainty by proper counseling, consultation and referral
- 2.2.10 Demonstrate insight into research and scientific methods through:
- a. Formulation of research questions that is pertinent to medicine.
 - b. Recognition of the importance of precision in collecting, analyzing and interpreting medical data.
 - c. Involvement in simple research

2.3-Practical and Clinical Skills

Graduate should acquire the following practical as well as Clinical skills and competencies during the undergraduate years

- 2.3.01 Demonstrate essential practical skills in basic sciences.
- 2.3.02 Take and record a structured, patient centered history.
- 2.3.03 Perform full physical examination appropriate to the age, gender, acute and chronic clinical conditions while being culturally sensitive.
- 2.3.04 Assess the mental state of the patient.

2.3.05 Formulate a management plan for common diseases and acute emergencies.

2.3.06 Work out drug dosage based on patient's weight, age and health condition and write safe prescriptions of different types of drugs.

2.3.07 Provide first aid measures for injured and critically ill patients.

Procedures and technical skills acquired during undergraduate and house officer training:

2.3.07 Perform venepuncture and collect blood samples.

2.3.08 Insert a cannula into peripheral veins.

2.3.09 Give intramuscular, subcutaneous, intradermal and intravenous injections.

2.3.10 Perform suturing of superficial wounds.

2.3.11 Demonstrate competency in cardiopulmonary resuscitation and basic life-support.

2.3.12 Administer compulsory childhood vaccines.

2.3.13 Perform and interpret basic bedside laboratory tests.

2.3.14 Perform and interpret ECG.

2.3.15 Administer basic oxygen therapy.

2.3.16 Use a nebuliser for administration of inhalation therapy.

2.3.17 Insert a nasogastric tube.

2.3.18 Perform bladder catheterization.

2.3.19 Perform procedure of normal labor.

2.3.20 Adopt suitable measures for infection control.

2.4- Professional Attitude and Behavioral Skills:

Graduates should be able to:

2.4.01 Adopt an empathic and holistic approach to the patients and their problems.

2.4.02 Respect patients' rights and involve them and /or their caretakers in management decisions.

2.4.03 Understand and comply with the different cultural believes and values in the community they serve.

2.4.04 Recognize the important role played by other health care professions in patients' management.

2.4.05 Be aware of and understand the national code of ethics.

2.4.06 Counsel patients and families suffering from different conditions.

House Officers should be able to:

2.4.07 Ensure confidentiality and privacy of patients' information.

2.4.08 Treat all patients equally, and avoid stigmatizing any category regardless of beliefs, culture, and behaviors.

2.4.09 Demonstrate respect and work cooperatively with other health care professions for effective patient management.

2.4.10 Be willing to share in all types of inter-professional activities including collaborative and shared learning.

2.4.11 Ensure the cost effectiveness of management.

2.5-Communication Skills:

2.5.01 Communicate clearly, sensitively and effectively with patients and their relatives, and colleagues from a variety of health and social care professions.

2.5.02 Communicate effectively with individuals regardless of their social, cultural or ethnic backgrounds, or their disabilities.

2.5.03 Cope with situations where communication is difficult including breaking bad news.

2.5.04 Show compassion to the patients and their relatives in situations of stress and grief.

2.5.05 Honor and respect patients and their relatives, superiors, colleagues and any other members of the health profession.

2.6-General and Transferable Skills:

Graduates will be able to:

2.6.01 Adopt the principles of lifelong learning.

2.6.02 Use computers efficiently.

2.6.03 Retrieve, manage, and manipulate information by all means, including electronic means.

2.6.04 Present information clearly in written, electronic and oral forms.

2.6.05 Communicate ideas and arguments effectively.

2.6.06 Effectively manage time and resources and set priorities.

2.6.07 Work effectively within a team.

2.6.08 Analyze and use numerical data (use simple statistical methods).

House Officers should be able to:

2.6.09 Use Evidence Based Medicine in management decisions.

2.6.10 Work efficiently within the health care team and as an effective team leader.

2.6.11 Solve problems related to patients, work management, and among colleagues.

2.6.12 Cope with a changing work environment.

2.6.13 Apply safety and infection control measures during practice.

2.6.14 Evaluate their work and that of others using constructive feedback.

Glossary

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