

**Mission and Outcomes for Graduates**

**College of Medicine**

**University of Duhok**

**The Vision, Mission, Objectives (VMO) and Outcomes**

**Vision**: Our vision is to recognize the college of medicine as an institution of excellence, among the leading medical colleges in the region and the world and to be an effective partner to improve the health situation in the province of Duhok.

**Mission**: Our College is a governmental scientific institution utilizing advanced concepts of medical education to graduate competent physicians capable of meeting their community needs**.**

**Objectives**

A. To graduate doctors who are:

1. Knowledgeable, skillful and able to address the health needs of their society.

2. Concerned with the issues of equity, quality and relevance in providing health care.

3. Decision makers.

4. Adhered to the ethical standard in their practice.

5. Able to be an active team leader.

6. Effective educator within the community.

7. Good health promoter and practitioner of preventive medicine.

8. Able to recognize the importance of research in enhancing health standard of the population.

9. A believer in continuing medical education as a tool of keeping good standard of skill and knowledge.

B. To conduct researches targeted at solving common problems in the community.

C. To provide opportunities for wide range of postgraduate studies leading to higher degrees for doctors in the region.

D. To contribute in spreading and updating medical knowledge and skills among doctors through continuous medical education.

E. To be the main source of medical expertise and service delivery for the province through active participation of the staff in hospitals and health centers.

**Learning Outcomes for Graduates:**

Modern medical colleges are keen to establish certain criteria for the graduating doctors. These outcomes will outline the curriculum and guide all the learning process to end up with a high quality graduates. After carefully reading a lot of outcomes papers established around the world Our college have selected the GMC (British General Medical Council 2016) outcomes of graduates to be the base for our Medical students are tomorrow’s doctors. In accordance with Good medical practice, graduates will make the care of patients their first concern, applying their knowledge and skills in a competent and ethical manner and using their ability to provide leadership and to analyze complex and uncertain situations.

**Outcomes 1- The doctor as a scholar and a scientist:**

 The graduate will be able to apply to medical practice biomedical scientific principles, method and knowledge relating to: anatomy, biochemistry, cell biology, genetics, immunology, microbiology, molecular biology, nutrition, pathology, pharmacology and physiology. The graduate will be able to:

a. Explain normal human structure and functions.

b. Explain the scientific bases for common disease presentations.

c. Justify the selection of appropriate investigations for common clinical cases.

d. Explain the fundamental principles underlying such investigative techniques.

e. Select appropriate forms of management for common diseases, and ways of preventing common diseases, and explain their modes of action and their risks from first principles.

f. Demonstrate knowledge of drug actions: therapeutics and pharmacokinetics; drug side effects and interactions, including for multiple treatments, long term conditions and non-prescribed medication; and also including effects on the population, such as the spread of antibiotic resistance.

g. Make accurate observations of clinical phenomena and appropriate critical analysis of clinical data.

 **Apply psychological principles, method and knowledge to medical practice.**

a. Explain normal human behavior at an individual level.

b. Discuss psychological concepts of health, illness and disease.

c. Apply theoretical frameworks of psychology to explain the varied responses of individuals, groups and societies to disease.

d. Explain psychological factors that contribute to illness, the course of the disease and the success of treatment.

e. Discuss psychological aspects of behavioral change and treatment compliance.

f. Discuss adaptation to major life changes, such as bereavement; comparing and contrasting the abnormal adjustments that might occur in these situations.

g. Identify appropriate strategies for managing patients with dependence issues and other demonstrations of self-harm.

 **Apply social science principles, method and knowledge to medical practice.**

a. Explain normal human behavior at a societal level.

b. Discuss sociological concepts of health, illness and disease.

c. Apply theoretical frameworks of sociology to explain the varied responses of individuals, groups and societies to disease.

d. Explain sociological factors that contribute to illness, the course of the disease and the success of treatment − including issues relating to health inequalities, the links between occupation and health and the effects of poverty and affluence.

e. Discuss sociological aspects of behavioral change and treatment compliance.

 **Apply to medical practice the principles, method and knowledge of population health and the improvement of health and healthcare.**

a. Discuss basic principles of health improvement, including the wider determinants of health, health inequalities, health risks and disease surveillance.

b. Assess how health behaviors and outcomes are affected by the diversity of the patient population.

c. Describe measurement methods relevant to the improvement of clinical effectiveness and care.

d. Discuss the principles underlying the development of health and health service policy, including issues relating to health economics and equity, and clinical guidelines.

e. Explain and apply the basic principles of communicable disease control in hospital and community settings.

f. Evaluate and apply epidemiological data in managing healthcare for the individual and the community.

g. Recognize the role of environmental and occupational hazards in ill-health and discuss ways to mitigate their effects.

h. Discuss the role of nutrition in health.

i. Discuss the principles and application of primary, secondary and tertiary prevention of disease.

j. Discuss from a global perspective the determinants of health and disease and variations in healthcare delivery and medical practice.

 **Apply scientific method and approaches to medical research.**

a. Critically appraise the results of relevant diagnostic, prognostic and treatment trials and other qualitative and quantitative studies as reported in the medical and scientific literature.

b. Formulate simple relevant research questions in biomedical science, psychosocial science or population science, and design appropriate studies or experiments to address the questions.

c. Apply findings from the literature to answer questions raised by specific clinical problems.

d. Understand the ethical and governance issues involved in medical research.

**Outcomes 2- The doctor as a practitioner**

 The graduate will be able to carry out a consultation with a patient:

a. Take and record a patient’s medical history, including family and social history, talking to relatives or other careers where appropriate.

b. Elicit patients’ questions, their understanding of their condition and treatment options, and their views, concerns, values and preferences.

c. Perform a full physical examination.

d. Perform a mental-state examination.

e. Assess a patient’s capacity to make a particular decision in accordance with legal requirements and the Ministry of Health guidance.

f. Determine the extent to which patients want to be involved in decision-making about their care and treatment.

g. Provide explanation, advice, reassurance and support.

 **Diagnose and manage clinical presentations.**

a. Interpret findings from the history, physical examination and mental-state examination, appreciating the importance of clinical, psychological, spiritual, religious, social and cultural factors.

b. Make an initial assessment of a patient’s problems and a differential diagnosis. Understand the processes by which doctors make and test a differential diagnosis.

c. Formulate a plan of investigation in partnership with the patient, obtaining informed consent as an essential part of this process.

d. Interpret the results of investigations, including growth charts, x-rays and the results of the diagnostic procedures in Appendix 1.

e. Synthesize a full assessment of the patient’s problems and define the likely diagnosis or diagnoses.

f. Make clinical judgments and decisions, based on the available evidence, in conjunction with colleagues and as appropriate for the graduate’s level of training and experience. This may include situations of uncertainty.

g. Formulate a plan for treatment, management and discharge, according to established principles and best evidence, in partnership with the patient, their careers, and other health professionals as appropriate. Respond to patients’ concerns and preferences, obtain informed consent, and respect the rights of patients to reach decisions with their doctor about their treatment and care and to refuse or limit treatment.

h. Support patients in caring for themselves.

i. Identify the signs that suggest children or other vulnerable people may be suffering from abuse or neglect and know what action to take to safeguard their welfare.

j. Contribute to the care of patients and their families at the end of life, including management of symptoms, practical issues of law and certification, and effective communication and team working.

 **Communicate effectively with patients and colleagues in a medical context.**

a. Communicate clearly, sensitively and effectively with patients, their relatives or other careers, and colleagues from the medical and other professions, by listening, sharing and responding.

b. Communicate clearly, sensitively and effectively with individuals and groups regardless of their age, social, cultural or ethnic backgrounds or their disabilities, including when local language is not the patient’s first language.

c. Communicate by spoken, written and electronic methods (including medical records), and be aware of other methods of communication used by patients. The graduate should appreciate the significance of non-verbal communication in the medical consultation.

d. Communicate appropriately in difficult circumstances, such as when breaking bad news, and when discussing sensitive issues, such as alcohol consumption, smoking or obesity.

e. Communicate appropriately with difficult or violent patients.

f. Communicate appropriately with people with mental illness.

g. Communicate appropriately with vulnerable patients.

h. Communicate effectively in various roles, for example, as patient advocate, teacher, manager or improvement leader.

 **Provide immediate care in medical emergencies.**

a. Assess and recognize the severity of a clinical presentation and a need for immediate emergency care.

b. Diagnose and manage acute medical emergencies.

c. Provide basic first aid.

d. Provide immediate life support.

e. Provide cardio-pulmonary resuscitation or direct other team members to carry out resuscitation.

 **Prescribe drugs safely, effectively and economically.**

a. Establish an accurate drug history, covering both prescribed and other medication.

b. Plan appropriate drug therapy for common indications, including pain and distress.

c. Provide a safe and legal prescription.

d. Calculate appropriate drug doses and record the outcome accurately.

e. Provide patients with appropriate information about their medicines.

f. Access reliable information about medicines.

g. Detect and report adverse drug reactions.

h. Demonstrate awareness that many patients use complementary and alternative therapies, and awareness of the existence and range of these therapies, why patients use them, and how this might affect other types of treatment that patients are receiving.

 **Carry out practical procedures safely and effectively.**

a. Be able to perform a range of diagnostic procedures, as listed in Appendix 1 and measure and record the findings.

b. Be able to perform a range of therapeutic procedures, as listed in Appendix 1-1.

c. Be able to demonstrate correct practice in general aspects of practical procedures, as listed in Appendix 1-1.

 **Use information effectively in a medical context.**

a. Keep accurate, legible and complete clinical records.

b. Make effective use of computers and other information systems, including storing and retrieving information.

c. Keep to the requirements of confidentiality and data protection legislation and codes of practice in all dealings with information. d. Access information sources and use the information in relation to

care, health promotion, giving advice and information to patients, and research and education.

e. Apply the principles, method and knowledge of health informatics to medical practice.

**Outcomes 3- The doctor as a professional**

 The graduate will be able to behave according to ethical and legal principles. The graduate will be able to:

a. Know about and keep to the College of Medicine and Ministry of Health ethical guidance and standards including Good medical practice, the ‘Duties of a doctor registered with the Ministry of Health and supplementary ethical guidance which describe what is expected of all doctors registered with the Ministry of Health.

b. Demonstrate awareness of the clinical responsibilities and role of the doctor, making the care of the patient the first concern. Recognize the principles of patient-centered care, including self-care, and deal with patients’ healthcare needs in consultation with them and, where appropriate, their relatives or careers.

c. Be polite, considerate, trustworthy and honest, act with integrity, maintain confidentiality, respect patients’ dignity and privacy, and understand the importance of appropriate consent.

d. Respect all patients, colleagues and others regardless of their age, color, culture, disability, ethnic or national origin, gender, lifestyle, marital or parental status, race, religion or beliefs, sex, sexual orientation, or social or economic status. Graduates will respect patients’ right to hold religious or other beliefs, and take these into account when relevant to treatment options.

e. Recognize the rights and the equal value of all people and how opportunities for some people may be restricted by others’ perceptions.

f. Understand and accept the legal, moral and ethical responsibilities involved in protecting and promoting the health of individual patients, their dependents and the public − including vulnerable groups such as children, older people, people with learning disabilities and people with mental illnesses.

g. Demonstrate knowledge of laws, and systems of professional regulation through the Ministry of Health and others, relevant to medical practice, including the ability to complete relevant certificates and legal documents and liaise with the coroner or procurator fiscal where appropriate.

 **Reflect, learn and teach others.**

a. Acquire, assess, apply and integrate new knowledge, learn to adapt to changing circumstances and ensure that patients receive the highest level of professional care.

b. Establish the foundations for lifelong learning and continuing professional development, including a professional development portfolio containing reflections, achievements and learning needs.

c. Continually and systematically reflect on practice and, whenever necessary, translate that reflection into action, using improvement techniques and audit appropriately − for example, by critically appraising the prescribing of others.

d. Manage time and prioritize tasks, and work autonomously when necessary and appropriate.

e. Recognize own personal and professional limits and seek help from colleagues and supervisors when necessary.

f. Function effectively as a mentor and teacher including contributing to the appraisal, assessment and review of colleagues, giving effective feedback, and taking advantage of opportunities to develop these skills.

 **Learn and work effectively within a multi-professional team.**

a. Understand and respect the roles and expertise of health and social care professionals in the context of working and learning as a multi-professional team.

b. Understand the contribution that effective interdisciplinary team working makes to the delivery of safe and high-quality care.

c. Work with colleagues in ways that best serve the interests of patients, passing on information and handing over care, demonstrating flexibility, adaptability and a problem-solving approach.

d. Demonstrate ability to build team capacity and positive working relationships and undertake various team roles including leadership and the ability to accept leadership by others.

 **Protect patients and improve care.**

a. Place patients’ needs and safety at the center of the care process.

b. Deal effectively with uncertainty and change.

c. Understand the framework in which medicine is practiced in Kurdistan, Iraq, including: the organization, management and regulation of healthcare provision; the structures, functions and priorities of the Ministry of Health;

and the roles of, and relationships between, the agencies and services involved in protecting and promoting individual and population health.

d. Promote, monitor and maintain health and safety in the clinical setting, understanding how errors can happen in practice, applying the principles of quality assurance, clinical governance and risk management to medical practice, and understanding responsibilities within the current systems for raising concerns about safety and quality.

e. Understand and have experience of the principles and methods of improvement, including audit, adverse incident reporting and quality improvement, and how to use the results of audit to improve practice.

f. Respond constructively to the outcomes of appraisals, performance reviews and assessments.

g. Demonstrate awareness of the role of doctors as managers, including seeking ways to continually improve the use and prioritization of resources.

h. Understand the importance of, and the need to keep to, measures to prevent the spread of infection, and apply the principles of infection prevention and control.

i. Recognize own personal health needs, consult and follow the advice of a suitably qualified professional, and protect patients from any risk posed by own health.

j. Recognize the duty to take action if a colleague’s health, performance or conduct is putting patients at risk.