UNITED ARAB EMIRATES

Competency Framework For Medical Education

EmiratesMEDs Scientific Committee 2023

The United Arab Emirates' Competency Framework for Medical Education has been developed by the Emirates Scientific Committee in close collaboration with critical stakeholders in the country's medical education and healthcare sectors.

Table of Contents

Contents

Foreword from Deans of Medicine 5

Foreword by the Commission for Academic Accreditation (CAA) 6

Foreword by the National Institute for Health Specialties (NIHS) 7

The Scientific Committee 9

Chapter 1: Introduction and Background 13

1.1 Methodology for Developing this Framework 14

Workflow Chart of Mixed Methods Used in Developing this Framework 15

1.2 Creation of Sub-Taskforces and Their Accomplishments 18

Chapter 2: Evolution of the Model 19

Chapter 3: Structure of EmiratesMEDs Competency Framework 20

3.1 Thematic roles, Core Competencies, & Enabling Competencies 21

3.2 Entrustable Professional Activities (EPAs) 30

Chapter 4: List of Skills and Clinical Presentation 51

4.1 List of Skills 51

4.2 Clinical Presentation 55

Chapter 5: Implementation and Future Developments 59

References 60

Appendix 1: Alignment with Other Frameworks 61

Alignment with QF-Emirates 61

Alignment with QF-Emirates with perceived weight 61

Alignment with CanMEDS 62

Alignment with ACGME and PCRS of AAMC 62

Appendix 2: Comparison of Existing Frameworks 63

Appendix 3: Competencies Mapped with EPAs 66

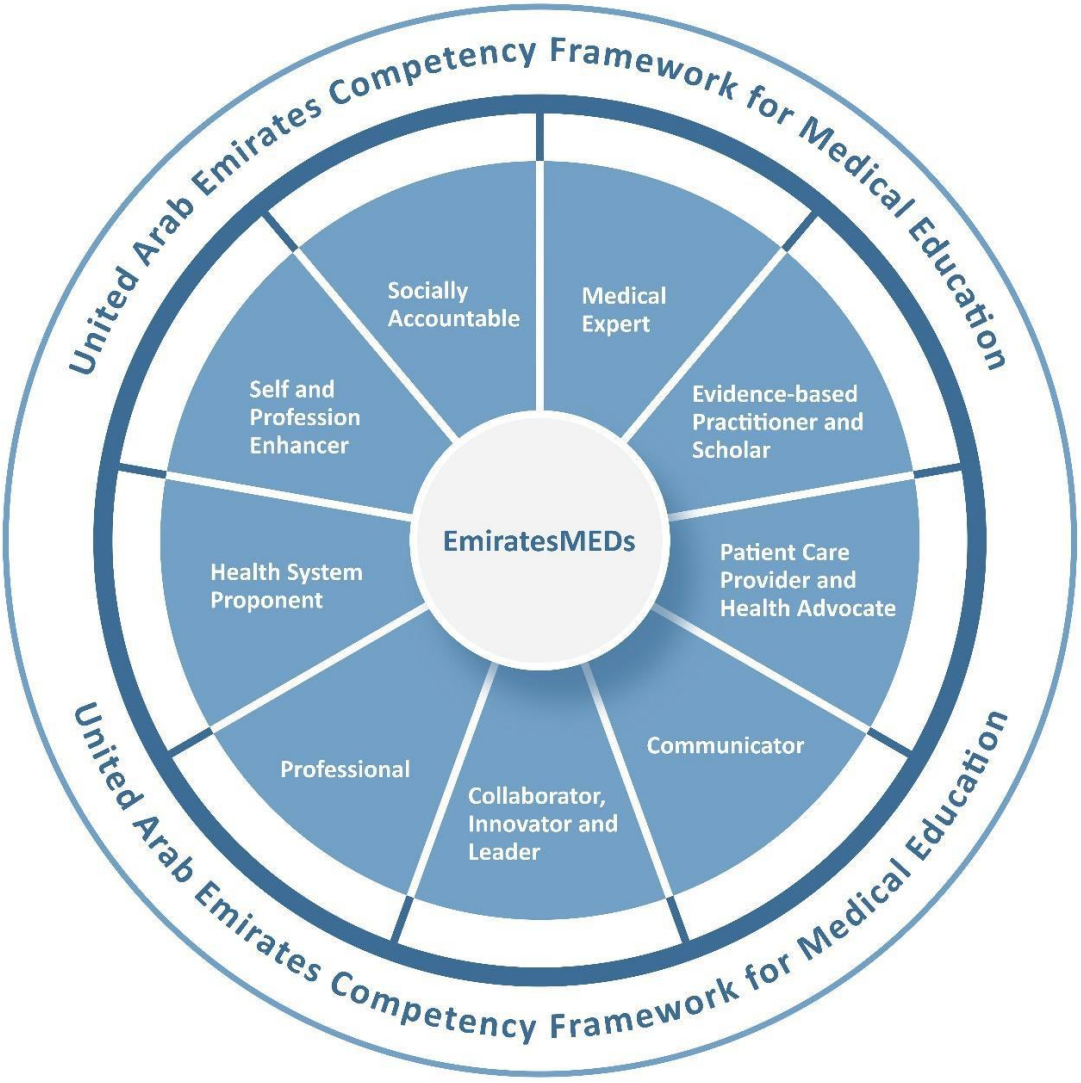
Appendix 4: Main Guiding Principles in Each Competency 95

Appendix 5: Rationale for Development (Literature Review) 98

Appendix 6: Needs Analysis-Regional and International 99

Appendix 7: The Initial Draft of Competency Framework 100

Thematic Roles of the Competency Framework for Medical Education in the United Arab Emirates -EmiratesMEDs



Foreword from Deans of Medicine

Having a National Competency Framework for Medical Education will greatly assist in defining relevant outcomes for medical programs in the country. In addition, it will enhance benchmarking and experience sharing among medical schools.

We would, therefore, like to acknowledge and thank all the stakeholders whose contributions have been the inspiration for this work. These include the SEHA (Abu Dhabi Health Services Company) and the Department of Health (DOH)-Abu Dhabi, the Dubai Health Authority, the Ministry of Health, community leaders as well as the faculty and students of our institutions.

We would like to especially thank the taskforce on the competency framework representing all medical schools. Our sincere appreciation also goes to the Commission for Academic Accreditation (CAA) who has been instrumental in this initiative from the start.

The Accreditation Council for Graduate Medical Education (ACGME) and International SaudiMEDs founders also have our profound gratitude for organizing faculty development for our institutions. Lastly, we thank the international reviewers whose contribution has been crucial in finalizing this document.

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Foreword by the Commission for Academic Accreditation (CAA)

I would like to take this opportunity to express my gratitude to all medical schools and other stakeholders whose close coordination and diligent work contributed to the completion of this significant document.

This project has unique value to the CAA because it will help in tailoring the learning outcomes of medical programs to the needs of society and the healthcare system. With this understanding and other benefits this framework is expected to bring to enhancing medical education in the UAE, the CAA has actively collaborated with other members of the Scientific Committee and Taskforce since the beginning of this project. Our commissioner, Prof Amjad Qandil, played a leading role in the development of this initiative and to date, we have worked closely with other health professions/disciplines to complete their competency frameworks.

The CAA will adopt this Framework and annex it to our standards 2019 after all Deans have signed it. We hope that medical schools will incorporate it into their curricula and use it to shape their learning outcomes. Future studies are anticipated to show how this Framework supports the delivery and evaluation of curricula because its objective is to produce doctors who are prepared for practice and sensitive to the demands of the nation's healthcare system.

Finally, my sincere gratitude and appreciation goes to everyone who actively contributed to the creation of this significant document.

Prof Mohammed Yousif Hasan Baniyas
Director of the Academic Accreditation Commission
Ministry of Education, UAE

Foreword by the National Institute for Health Specialties (NIHS)

Competency-based medical education has had a significant impact on medical education around the world. National frameworks were used as a starting point to identify graduate competencies, which would then be reflected in medical student and resident training.

The UAE has a long history of using the ACGME framework to guide both training assessment and quality improvement of various residency programs. The creation of a National Framework tailored to the needs of the UAE is a significant step forward. As a result, we have actively participated in all taskforce meetings and workshops through the Secretary General and Dr Elsheikh Elsiddig's representation. Furthermore, because this framework is completely aligned with ACGME, we will be able to adapt and adopt it.

We are confident we can adapt the list of Entrustable Professional Activities (EPAs) suggested in this Framework as a starting point across all residency programs, similar to what is practiced in the US.

I would like to take this opportunity to thank everyone who helped to finalize this document and to provide assurance that the NIHS will continue to collaborate on future phases of this project. The goal is to ensure a smooth transition from undergraduate programs to future practice through residency training.

Dr. Mohammed Al Houqani
Secretary General,
National Institute of Health Specialties

Executive Summary

The program to create a national competency framework for medical education was jointly launched by the College of Medicine and Health Sciences (CMHS) of the United Arab Emirates University, and the Commission for Academic Accreditation (CAA), and the initiative was endorsed by the Deans' Committee at their October 2019 meeting held at CMHS, UAEU.

Representatives from all medical schools, the National Institute of Health Specialties, and health authorities formed a taskforce with the following objectives:

- Agree on themes of the framework
- Define competencies/program learning outcomes (CLOs/PLOs) in each theme
- Define enabling competencies
- Detail sub-competencies to guide CLOs
- Define list of Entrustable Professional Activities (EPAs)
- Agree on strategies to disseminate and implement the framework

The Taskforce began their work in February 2021 and for more than two years, held regular monthly meetings. In its first meeting, two sub-Taskforces were created:

- Sub-Taskforce for competencies
- Sub-Taskforce for EPAs and clinical skills

Both sub-Taskforces conducted several meetings focused on needs analysis, literature review, and benchmarking with international frameworks. Once the competencies and EPAs were identified, the first draft National Framework was created. This first draft and subsequent ones were reviewed for prioritization of outcomes and further inclusions and deletions using the Delphi method.

Review of internationally accepted models through workshops by experts from SaudiMED and ACGME proved to be a great opportunity for faculty enhancement. A proposed Framework emerged after several rounds of feedback analysis and panel meetings.

The Proposed Framework

The proposed Framework consists of 9 thematic roles described as Core Competencies and each subdivided into enabling competencies. These thematic roles and their enabling competencies are specifically framed to suit the future needs of the UAE and the long-term vision of the nation. The unique demographics, healthcare needs, and explosive growth of information in the Nation and region were also given special consideration. The proposed list of 9 thematic roles is in line with the Qualifications Framework for the UAE (QF Emirates), the Canadian Physician Competency Framework (CanMEDS), ACGME and Association of American Medical Colleges - Physician Competencies Reference Set (AAMC-PCRS).

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Glossary of Terms

MEDs
Medical Education Directives (M, E and D should be written in uppercase while s in lower case)

Competency-Based Medical Education (CBME)
An outcomes-based approach to the design, implementation, assessment, and evaluation of medical education programs, using an organizing framework of competencies.

Competency Framework
A basic conceptual structure including relevant physician's duties and obligations around which core competencies can be built.

Learning outcomes
Learning outcomes are statements of what it is expected that the student will be able to do after taking part in a learning a activity (Jenkins and Unwin, 2001).

Theme or domain
Each theme or domain is focused on describing relevant physician's duties and obligations. In this Framework, 9 thematic roles have been identified as key for the successful completion of a medical program.

Core Competencies
These are key competencies (learning outcomes) a physician should obtain. They are further detailed at each level of training, while paying special consideration to area of specialty and stage of specialization.

Competence
The array of abilities across multiple domains or aspects of physician performance in a given context. Statements about competence require descriptive qualifiers to define the relevant abilities, context, and stage of training. Competence is multi-dimensional and dynamic, changing with time, experience, and setting.

Competency
An observable ability of a health professional, integrating multiple components such as knowledge, skills, values, and attitudes. Since competencies are observable, they can be measured and assessed to ensure their acquisition. Competencies can be assembled like building blocks to facilitate progressive development.

Competent
Possessing the required abilities in all domains in a certain context at a defined stage of medical education or practice.

Dyscompetence
Possessing relatively less ability in one or more domains of physician competence in a certain context and at a defined stage of medical education or practice.

Enabling Competencies

These are competencies which are essential for all undergraduate medical programs in the United Arab Emirates. Competency training at this level is strongly connected to the nature of medical education and the practice of a given specialty. They are equivalent to the learning outcomes of individual courses.

Entrustable Professional Activity (EPA)

An entrustable professional activity is a unit of professional practice that can be fully entrusted to a medical student once he or she has demonstrated the necessary competence to execute this activity unsupervised. "Unit "signifies a discrete task (e.g., "Managing patients with cataract") or bundle of tasks (e.g., "Performing the procedures of internal medicine" or "Managing an inpatient medical service") and should be suitable for credentialing.

EPAs are legitimate contributions to healthcare practice made by trained which learners can only achieve within a clinical context. "Presenting a paper in a classroom setting" would not be an EPA. Even within the clinical context, not all activities can be qualified as EPAs (Ten Cate, O. and Taylor, D. R., 2020).

Incompetent

Lacking the required abilities in all domains in a certain context at a defined stage of medical education or practice.

Milestone/Sub-competency

Milestones are behavioral descriptions of the knowledge, skills, and attitudes that determine each of the sub-competencies within the broader competency domain's developmental process. As a result, they help learners understand where they are and what information, abilities, and attitudes are required to advance to the next level(s).

Milestones serve as a roadmap for the development of competencies and sub-competencies. Each milestone provides discrete, observable actions that characterize the development of specific knowledge, abilities, and attitudes within each of the general competencies, culminating in the description of a proficient trainee.

Progression of Competence

This refers to the spectrum of ability from novice to mastery for each aspect or domain of competence. The goal of medical education is to facilitate the development of a physician to the level of ability required for optimal practice in each domain. At any given point in time, and in any given context, an individual physician will reflect greater or lesser ability in each domain.

Chapter 1: Introduction and Background

A Competency-Based Framework is defined as a basic conceptual structure including relevant physician's duties and obligations around which core competencies can be built, whereas Competency-Based Medical Education (CBME) is defined as an outcomes-based approach to the design, implementation, assessment, and evaluation of medical education programs, using an organizing framework of competencies. Outcome-based education is considered a paradigm shift and the most significant development in medical education in the last three decades. There are many rationales which led to the evolution of this new approach to medical education. Prominent among them is the shift from a teacher-centered to a student-centered approach. The latter focusses on what the student should know and what he/she will be able to do at the end of their program.

In an era of greater public accountability, medical curricula must ensure that all graduates are competent in all essential domains. However, not all curricula currently in use explicitly define and address all desired outcomes. Furthermore, not all current curricula assess or ensure that graduates have acquired all the necessary abilities. For example, assessment scores are compensatory from one domain to another (i.e., excellent knowledge may be considered a compensation for poor communication skills). In this regard medical education tends to emphasize process (e.g., instructional methods) over outcomes (e.g., graduate performance and satisfaction). In view of this, medical education needs to be more transparent for learners, teachers, and the public with respect to its goals and effectiveness and must prepare trainees for practice. CBME emphasizes competencies that contribute to a student's preparedness for practice.

Another rationale for CBME is the importance of shifting the emphasis of medical curricula to abilities necessary to serve the healthcare needs of society and deliver optimal healthcare services. To achieve this shift, educational objectives are replaced with a hierarchy of competencies as the organizing framework.

De-emphasizing time-based training in favor of outcomes is yet another rationale for CBME. In time-based training, the focus is on the time a learner spends on an educational unit where as in CBME, focus is on the learning attained. This would mean a change from fixed time and flexible standards to fixed standards and flexible time in medical education programs.

Based on these rationales, many countries identify and outline medical competencies using well-defined frameworks such as the Accreditation Council for Graduate Medical Education (ACGME) in the USA, CanMEDs in Canada, Tomorrow's Doctors in the UK and SaudiMED in the KSA. These frameworks helped to reform medical education curricula in their respective countries by making them more relevant to societal needs and by ensuring they graduate physicians who are 'fit for purpose' and 'ready for practice'.

However, the implementation of CBME faced many challenges because competencies were considered rather abstract and general, difficult to observe and hence, difficult to assess.

Some competencies, such as professionalism, are even difficult to teach. Additionally, the concept of competencies is found to be difficult to define and different teachers have different interpretations.

To address these challenges, Entrustable Professional Activities (EPAs) were introduced into medical education. Entrustable Professional Activities are defined as units of professional practice (tasks) that may be entrusted to a learner to execute unsupervised once he or she has demonstrated the required competence. It is a shift of focus from individual competencies to the work that must be done. It is important to note that EPAs do not replace CBME. Rather, they make competencies more observable, teachable, and assessable.

The relationship between EPAs and competencies is discussed in this document. One of the defining markers of an EPA is that its performance requires the integration of competencies, usually across domains. In keeping with this understanding, the Scientific Committee aligned the competencies with the fourteen EPAs and defined the level of attainment of each EPA milestone at each stage of the medical program.

1.1 Methodology for Developing this Framework

The National Competency Taskforce was established by the Dean of Medical Schools in collaboration with the Commission for Academic Accreditation (CAA) and under the auspices of the NIHS. In February 2021, the taskforce nominated members from different stakeholder agencies and institutions, including medical schools in the country. Participants also included thought leaders relevant to healthcare and education such as the CAA Ministry of Education, National Qualification Framework (QF-Emirates), health services authorities, and graduate medical educational institutions.

The Aims of This Taskforce

- Agree on themes of the framework
- Define competencies/program learning outcomes (CLOs/PLOs) in each theme
- Define enabling competencies
- Detail sub-competencies to guide CLOs
- Define list of Entrustable Professional Activities (EPAs)
- Agree on strategies to disseminate and implement the agreed framework

Methodology of Development

The methodology consisted of mixed methods including:

i. Literature review
ii. Quantitative Web-Based Surveys
iii. Qualitative methods utilizing interviews, focus groups and Delphi technique.
iv. Workshops
v. Regular meetings of the scientific committee.
vi. Validation by external panel

Workflow Chart of Mixed Methods Used in Developing this Framework

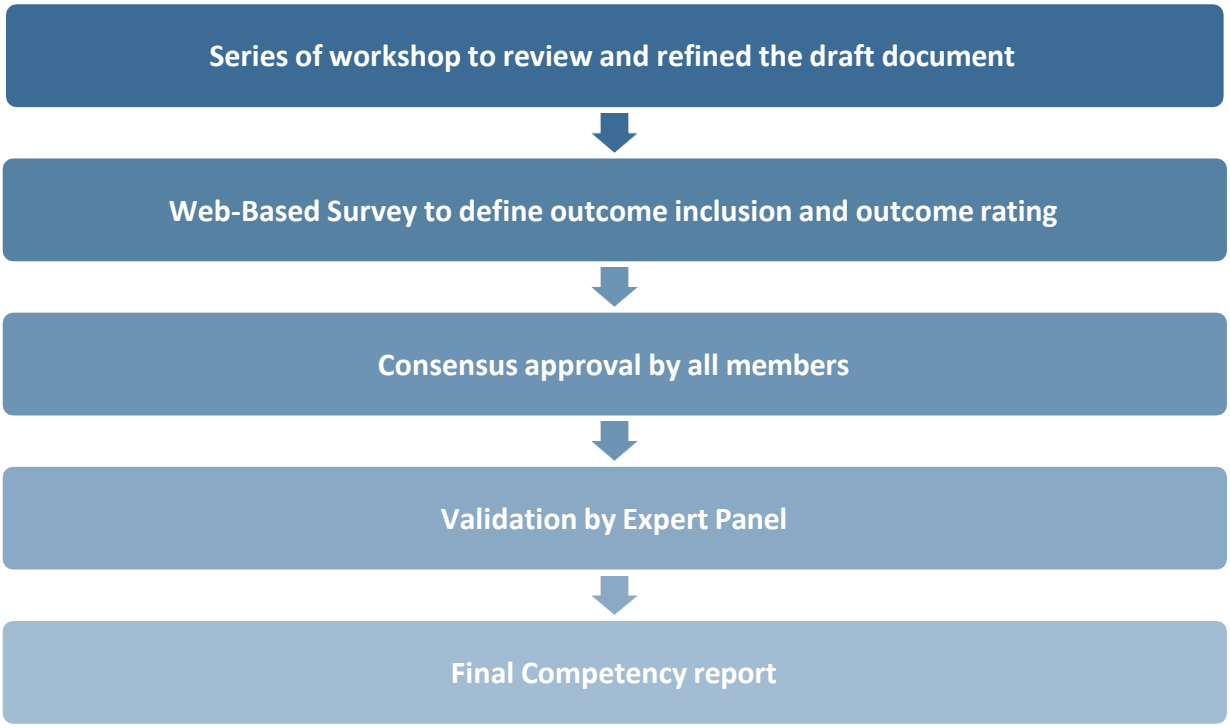


Figure 1: Workflow Chart of Mixed Methods Used in Developing this Framework

Literature Review on the Methodology of Developing Competency Framework

Methodology

Through a multilayer process that involved developing an initial framework, reviewing existing literature related to competencies in relevant areas, conducting a series of consultations with potential end-users and then convening a UAE consensus conference, the final set of competencies for medical students was selected. The competencies are grouped into main areas and the final competencies are listed. LINK: https://cdn.who.int/media/docs/default-source/patient-safety/core-competencies/ps_reaserch_competit_development_27_2010.pdf

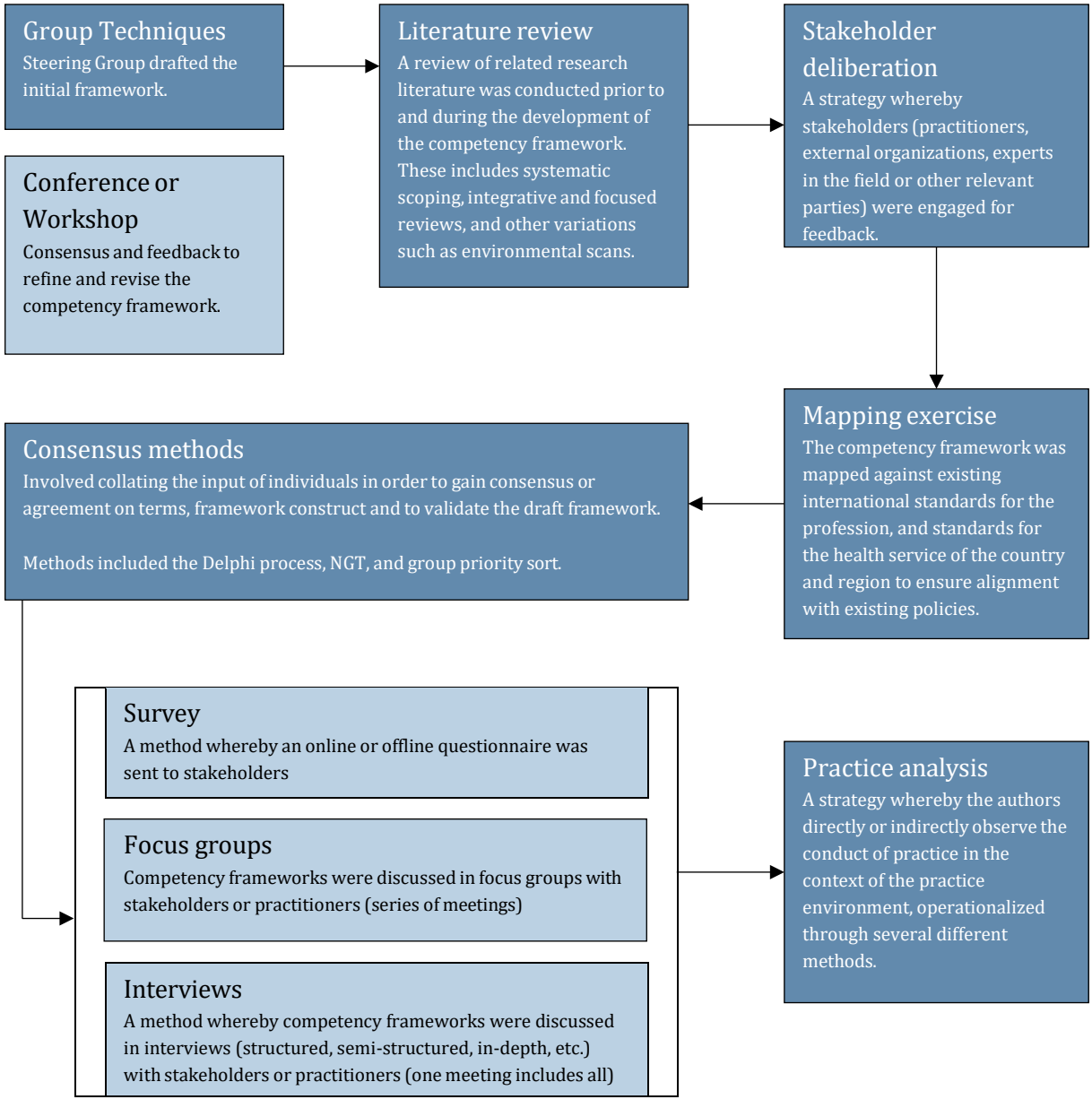


Figure 2: Literature Review on Methodology of Developing Competency Framework

Step-By-Step Process of Developing the Competencies

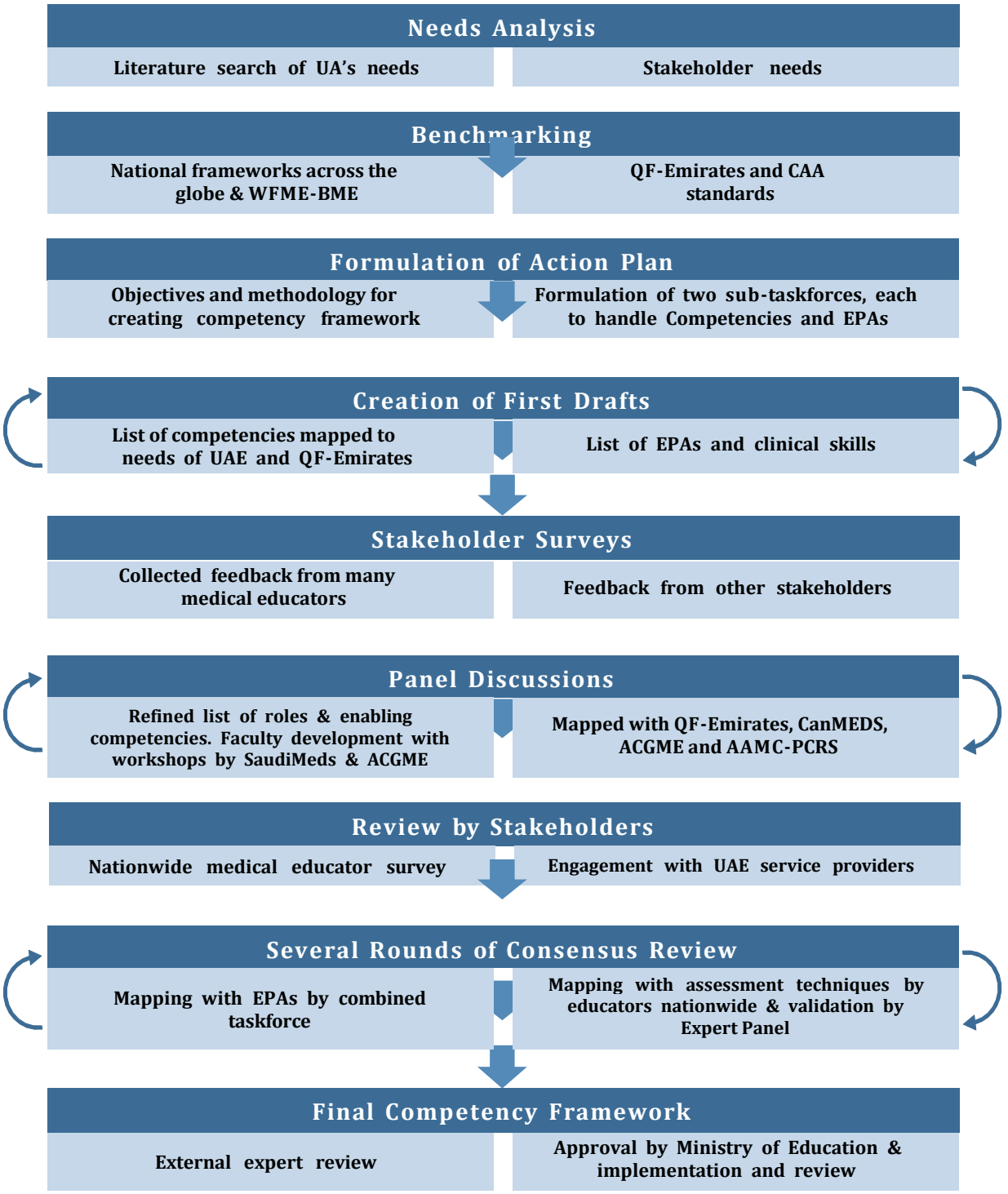


Figure 3: Step-by-Step Process of Developing the Competencies

1.2 Creation of Sub-Taskforces and Their Accomplishments

The main taskforce initiated their work to define the overall vision and objectives of the project in February 2021. At its first meeting, two sub-taskforces were created:

(i) Sub-taskforce for competencies

(ii) Sub-taskforce for EPAs and clinical skills

Both sub-taskforces conducted several meetings on needs analysis, literature search and benchmarking with international frameworks.

Phase I

Outcomes/competencies and Entrustable Professional Activities (EPAs) were identified by the two sub-taskforces, and first drafts were created. Both drafts were reviewed for prioritization of outcomes and further inclusions and deletions by Delphi method. Review of internationally accepted models through workshop by experts of SaudiMed and Accreditation Council for Graduate Medical Education (ACGME) provided great opportunity for faculty development. This helped to scrutinize the models further, and after several rounds of feedback analysis and panel meetings, the proposed framework was prepared. Feedback on the competency framework and EPAs was received separately from stakeholders using anonymized surveys and interviews. Steps were also taken to systematically engage the healthcare service providers of UAE.

Phase II

Core members of the Competency and the EPA sub-taskforces ensured alignment of the competencies with the EPAs. Stakeholder feedback and the outcome of alignment by experts were later reviewed by the panelists over multiple sessions of a workshop involving national and international experts, including medical educators, administrators, curriculum experts, healthcare service providers and accreditation authorities.

Phase III

A consensus was reached to map the assessment techniques applied during this high-level workshop with that of medical educators' nationwide. The taskforce met to deliberate on the level of achievement of each EPA identified and for each, key functions were identified in alignment with the ACGME's EPAs. Furthermore, the Milestones to be achieved at the start of clerkship, intermediate stages and at the time of graduation were identified for each key function. These were listed as: Behaviors requiring corrective response, Developing behaviors and Required behaviors at graduation.

Phase IV

The Competency Framework proposal was sent to external experts for review, and the final framework is expected to be put forward for implementation and review after approval by the CAA, Ministry of Education.

Chapter 2: Evolution of the Model

The competency sub-taskforce initially compiled domains from different frameworks in use across the globe into 3 domains aligned with QF-Emirates. The team then identified 3 sub-domains for each domain and 3 activities for each sub-domain, leading to a total of 27 sub-competencies.

A panel of taskforce members collected stakeholder feedback on the first draft and compared the draft with QF Emirates, CanMEDS, ACGME and AAMC-PCRS. Following several rounds of discussions however, it was decided that there was no need for three levels. The new set of competencies were, therefore, categorized as themes denoting the roles of a medical graduate.

The Sub-taskforce on EPAs arrived at 14 EPAs after reviewing the recommendations put forward by the ACGME. A trial to assess the practicability of these EPAs was then conducted by two colleges and the tested and approved list of clinical skills and EPAs was compiled as the proposed EPAs.

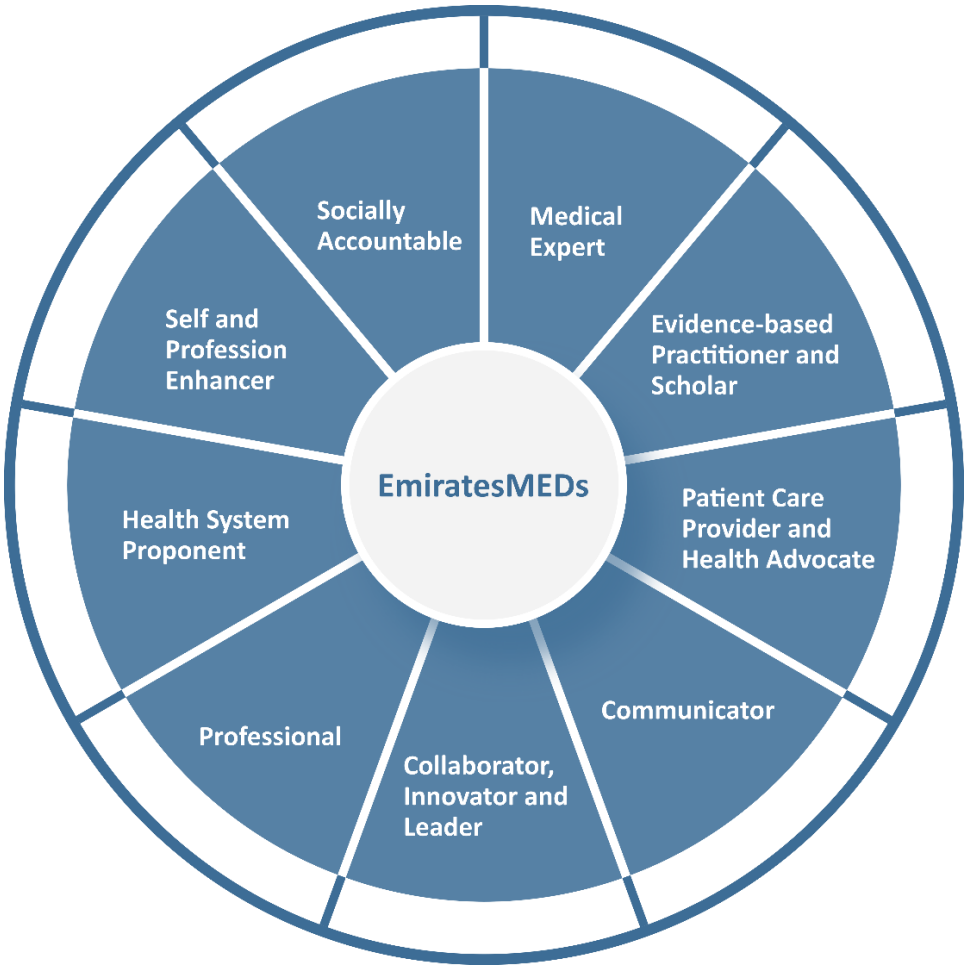
Proposed Structure of the Framework

The proposed Framework consists of nine thematic roles. Each thematic role is described as a Core Competency and each one is subdivided into Enabling Competencies. The thematic roles and their enabling competencies are framed specifically to suit the future needs of the UAE and the long-term vision of the nation. The unique demographics, healthcare needs and explosive growth of information in the nation and the region were also given special consideration.

Chapter 3: Structure of EmiratesMEDs Competency Framework

The following 9 thematic roles are organized in a circular chart reflecting their progression and interdependence:

Theme 1.	Medical Expert
Theme 2.	Evidence-based Practitioner and Scholar
Theme 3.	Patient Care Provider and Health Advocate
Theme 4.	Communicator
Theme 5.	Collaborator, Innovator and Leader
Theme 6.	Professional
Theme 7.	Health System Proponent
Theme 8.	Self and Profession Enhancer
Theme 9.	Socially Accountable



3.1 Thematic roles, Core Competencies, & Enabling Competencies

Thematic Role	Core Competency	Comp. code	Enabling Competencies
Theme 1: Medical Expert	**Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and psychosocial sciences, and apply this knowledge to patient and population care through the clinical reasoning approach.**	ME1	Demonstrate an investigatory and analytic approach to clinical situations
		ME2	Apply established and emerging biophysical scientific principles to health care for patients and populations
		ME3	Apply established and emerging principles of clinical sciences to diagnostic and therapeutic decision-making, clinical problem solving, and other aspects of evidence-based health care.
		ME4	Apply principles of epidemiological sciences to the identification of health problems, risk factors, treatment strategies, resources, health system development, and disease prevention/health promotion efforts for patient and population care.
		ME5	Apply principles of social-behavioral sciences to the provision of patient-centered and relationship-based care, including assessment of impact of psychosocial-cultural influences on health, disease, care-seeking, care compliance, as well as barriers to and attitudes toward patient and population care
		ME6	Contribute to the creation, dissemination, application, and translation of new health care knowledge and practices
		ME7	Demonstrate an ability to manage infodemic (too much information including false or misleading information in digital and physical environments during a disease outbreak) while respecting cultures, social values, and legislation in UAE.

Thematic Role	Core Competency	Comp. code	Enabling Competencies
Theme 2: Evidence-based Practitioner and Scholar	**Demonstrate ability to continuously improve through self-evaluation and lifelong learning; and ability to investigate and evaluate patient care using an evidence-based approach gathered from high quality research, practitioner experience, and based on value to the patient, while considering the context of care.**	EBS1	Systematically analyze practice using quality improvement methods and implement changes with the goal of practice improvement.
		EBS2	Incorporate feedback into daily practice.
		EBS3	Inquire, gather, assess, and apply evidence from scientific studies related to patients' health problems.
		EBS4	Demonstrate use of information technology systems and health informatics to support evidence-based care.
		EBS5	Obtain and utilize information about individual patients, populations of patients, or patients' communities to improve care.
		EBS6	Continually identify, analyze, and implement new knowledge, guidelines, standards, technologies, products, and services to improve outcomes.
		EBS7	Demonstrate knowledge management and translation ability to improve patient and population care and the healthcare system as a whole.
		EBS8	Demonstrate ability to conduct research following scientific approach, including writing a proposal, implementing research, manuscript writing, and disseminating findings guided by research ethics.

Thematic Role	Core Competency	Comp. code	Enabling Competencies
Theme 3: Patient Care Provider and Health Advocate	**Provide patient-and population-centered care that is compassionate, appropriate, and effective for the management and prevention of common health problems; and advocate patient rights and patient safety.**	PC1	Perform all medical, diagnostic, and surgical procedures considered essential for the area of practice as a generalist.
		PC2	Gather essential and accurate information about patients and their conditions through a clinical reasoning approach involving history-taking, physical examination, and the use of laboratory data, imaging, and other tests.
		PC3	Organize and prioritize responsibilities to provide safe, effective, and efficient care.
		PC4	Interpret laboratory data, imaging studies, and other tests required for the area of practice as a generalist.
		PC5	Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
		PC6	Develop and conduct effective and appropriate patient management plans.
		PC7	Counsel and educate patients and their families to empower them to participate in their care and enable shared decision-making when appropriate.
		PC8	Provide appropriate referral of patients including ensuring continuity of care throughout transitions between providers or settings and following up on patient progress and outcomes.
		PC9	Provide health care services to patients, families, and communities to prevent health problems or maintain health.
		PC10	Advocate for health through appropriate health promotion strategies and interventions grounded on social determinants of health.
		PC11	Participate in the education of patients, families, students, trainees, peers, and other health professionals.

Thematic Role	Core Competency	Comp. code	Enabling Competencies
Theme 4: Communicator	**Demonstrate written, verbal, and non-verbal interpersonal communication skills that result in effective interactions with patients, their families, and health professionals**	C1	Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds.
		C2	Demonstrate effective therapeutic relationships with patients and their families that facilitate the gathering and sharing of essential information and develop plans that reflect the patient's health needs and goals.
		C3	Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies.
		C4	Work effectively with others as a member or leader of a health care team or other professional groups.
		C5	Demonstrate ability to act in a consultative role to other health professionals.
		C6	Document and share comprehensive, timely and relevant written and electronic information about medical encounters to optimize clinical decision-making, patient safety, confidentiality, and privacy.
		C7	Demonstrate sensitivity, honesty, and compassion in difficult conversations (e.g., about issues-such as death, end-of-life issues, adverse events, bad news, disclosure of errors, and other sensitive topics).
		C8	Demonstrate insight and understanding about emotions and human responses to emotions that allow one to develop and manage interpersonal interactions.
		C9	Demonstrate the ability to prevent and resolve inter-professional team conflicts.

Thematic Role	Core Competency	Comp. code	Enabling Competencies
Theme 5: Collaborator, Innovator & Leader	**Demonstrate the ability to collaborate and lead a health team and actively engage in an interprofessional health team in a manner that optimizes safe, effective patient and population-centered care**	CIL1	Work with other health professionals to establish and maintain a climate of mutual respect, dignity, diversity, ethical integrity, and trust.
		CIL2	Use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of the patients and populations served.
		CIL3	Communicate with other health professionals in a responsive and responsible manner that supports the maintenance of health and the treatment of disease in individual patients and populations.
		CIL4	Participate in different team roles to establish, develop, and continuously enhance interprofessional teams to provide patient- and population-centered care that is safe, timely, efficient, effective, and equitable.
		CIL5	Demonstrate leadership skills that enhance team functioning, the learning environment, and/or the health care delivery system.
		CIL6	Propose creative and innovative initiatives and solutions to priority health problems.
		CIL7	Promote entrepreneurship and sustainability as cost effective strategies to meet the health needs of the population in UAE.

Thematic Role	Core Competency	Comp. code	Enabling Competencies
Theme 6: Professional	**Carry out professional responsibilities and activities through demonstration of commitment and adherence to ethical principles**	P1	Demonstrate compassion, integrity, and respect for others.
		P2	Demonstrate responsiveness to patient needs that supersede self-interest.
		P3	Demonstrate respect for patient privacy and autonomy.
		P4	Demonstrate accountability to patients, society, and the profession as role models.
		P5	Demonstrate sensitivity and responsiveness to a diverse patient population in UAE, including but not limited to diversity in gender, age, culture, race, religion, and disabilities.
		P6	Demonstrate a commitment to ethical principles pertaining to the provision of care, confidentiality, informed consent, and business practices, including compliance with relevant national laws, policies, and regulations.
		P7	Exhibit professional behaviors in the use of technology-enabled communication including social media.
		P8	Recognize and respond to unprofessional and unethical behaviors in physicians and other colleagues in health care professions.
		P9	Recognize and manage conflict of interest.
		P10	Exhibit self-awareness and manage influences on personal well-being and Professional performance.
		P11	Manage personal and professional demands for a sustainable practice throughout the physician life cycle.
		P12	Promote a culture that recognizes, supports, and responds effectively to colleagues in need.
		P13	Develop a professional identity acknowledging a commitment to the health and well-being of patients, families, society, and peers.

Thematic Role	Core Competency	Comp. code	Enabling Competencies
Theme 7: System-Based Healthcare Advocate	**Demonstrate an awareness of and responsiveness to the larger contextand system of health care in UAE, as well as use resources effectively to contribute to the development of the system to provide optimal health care**	HS1	Work effectively in various health care delivery settings and systems relevant to one's clinical specialty.
		HS2	Coordinate patient care within the health care system relevant to one's clinical specialty.
		HS3	Incorporate considerations of cost awareness and the risk-benefit analysis of patients and/or population-based care.
		HS4	Advocate for quality patient care and optimal patient care systems.
		HS5	Participate in identifying system errors and implementing potential systems solutions.
		HS6	Perform and practice administrative and management responsibilities commensurate with one's role, abilities, and qualifications.
		HS7	Utilize technology and systems responsibly and effectively, maintaining security, ensuring currency, and proposing improvement.
		HS8	Devise and contribute to developing innovative approaches to improve access and quality of care.
		HS9	Describe national health care systems, including their organizations, financing, health insurance, policies, and procedures.

Thematic Role	Core Competency	Comp. code	Enabling Competencies
Theme 8: Self and Profession Enhancer	**Demonstrate the qualities required to sustain lifelong learning and professional growth**	SPE1	Develop the ability to use self-awareness of knowledge, skills, and emotional wellbeing to engage in appropriate help-seeking behaviors.
		SPE2	Demonstrate resilience and healthy coping mechanisms to respond to stress.
		SPE3	Manage conflict between personal and professional responsibilities.
		SPE4	Practice flexibility and maturity in adjusting to change with the capacity to alter behavior.
		SPE5	Demonstrate trustworthiness that makes colleagues feel secure when one is responsible for the care of patients.
		SPE6	Demonstrate self-confidence that puts patients, families, and health-care team members at ease.
		SPE7	Recognize that ambiguity is part of clinical health care and respond by using appropriate resources in dealing with uncertainty.
		SPE 8	Identify strengths, deficiencies, and limits in one's knowledge and expertise.
		SPE 9	Set learning and improvement goals.
		SPE10	Identify and perform learning activities that address one's gaps in knowledge, skills, or attitudes.
		SPE 11	Manage personal and professional demands for a sustainable practice throughout the physician life cycle; and promote a culture that recognizes, supports, and responds effectively to colleagues in need.

Thematic Role	Core Competency	Comp. code	Enabling Competencies
Theme 9: Socially accountable	**Meet the health needs of patients and society, demonstrate improved health outcomes, and promote health equity, relevance, collaboration, cost-effectiveness, and quality**	SA1	Demonstrate an understanding of the influence and potential implications of social determinants on health-related beliefs, behaviors, and outcomes, and incorporate this knowledge into patient care.
		SA2	Identify and utilize appropriate sources of information to analyze significant public health issues, applying data to reach defensible conclusions.
		SA3	Accurately describe the organization and basic financial models of the UAE's health care systems and the potential impact of every system on patients for whom the student has provided care.
		SA4	Accept and report personal biases and errors, identify potential sources of errors, and develop action plans to reduce the risk of future errors.
		SA5	Collaborate with stakeholders inside and outside the healthcare system to coordinate optimal care and improve health.
		SA6	Apply knowledge of health advocacy, systems, and policy to identifying strategies for reducing health disparities and promoting individual and population health.
		SA 7	Demonstrate accountability to patients, society, and the profession by responding to societal expectations of physicians.
		SA8	Demonstrate a commitment to patient safety and quality improvement.
		SA9	Demonstrate commitment to equitable distribution of healthcare resources to under-privileged strata of the population of UAE by providing cost-effective and quality health care.
		SA10	Demonstrate commitment to cater to the unique demands of the floating population and predominantly expatriate demographics of UAE.

3.2 Entrustable Professional Activities (EPAs)

Below is a breakdown of the 14 EPAs identified by the sub-Taskforce according to key functions, behaviors requiring corrective response, developing behaviors, and required behaviors of medical students at graduation.

EPA 1.	Gather a history and perform a physical examination
EPA 2.	Prioritize a differential diagnosis following a clinical encounter
EPA 3.	Recommend and interpret common diagnostic and screening tests
EPA 4.	Formulate, communicate, and implement management plans
EPA 5.	Document a clinical encounter in the patient record
EPA 6.	Provide an oral presentation of a clinical encounter
EPA 7.	Form clinical questions and retrieve evidence to advance patient care
EPA 8.	Give or receive a patient handover to transition care responsibility
EPA 9.	Collaborate as a member of an interprofessional team
EPA 10.	Recognize patients and situations requiring urgent or emergent care and initiate evaluation or management
EPA 11.	Obtain informed consent for tests and/or procedures
EPA 12.	Perform general procedures of a physician conforming to local context
EPA 13.	Identify system failures and contribute to a culture of safety and improvement
EPA 14.	Educate patient and promote the health of the community

EPA 1: Gather patient history and perform a physical examination			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Obtain a complete and accurate patient history in an organized way	*Collects incomplete or inaccurate historical data *Relies exclusively on secondary resources or documentation of others	*Gathers history; but excessive or incomplete *Does not deviate from a template	*Obtains complete and accurate history in an organized fashion. *Seeks secondary sources of information when appropriate (e.g., family, primary care. physician, living facility, pharmacy). *Adapts to different care settings and encounters.
(b) Demonstrate patient-centered interview skills	*Is disrespectful in interaction with patients *Disregards patient privacy and autonomy	*Communicates unidirectionally and does not respond to patient verbal and non-verbal cues. *May generalize based on age, gender, culture, race, religion, disabilities, and/or sexual orientation. *Does not consistently consider patient privacy and autonomy.	*Adapts communication skills to the individual patient's needs and characteristics. *Responds effectively to patient's verbal and non-verbal cues and emotions.
(c) Demonstrate clinical reasoning in gathering focused information relevant to a patient's care	*Fails to recognize patient's central problem	*Questions are not guided by the evidence and data collected. Does not prioritize or filter information. *Questions reflect a narrow differential diagnosis	*Demonstrates astute clinical reasoning through targeted hypothesis-driven questioning. *Incorporates secondary data into medical reasoning.

(d) Perform a clinically relevant, appropriately thorough physical exam pertinent to the setting and purpose of the patient visit.	*Does not consider patient's privacy and comfort during examination *Incorrectly performs basic physical examination maneuvers	*Performs basic exam maneuvers correctly but does not perform exam in an organized fashion. *Relies on head-to-toe examination. Misses key findings.	*Performs an accurate exam in a logical and fluid sequence. *Uses the exam to explore and prioritize the working differential diagnosis. *Can identify and describe normal and abnormal findings.

EPA 2: Prioritize a Differential Diagnosis Following a Clinical Encounter			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Synthesize essential information from previous records, history, physical exam, and initial diagnostic evaluations to propose a scientifically supported differential diagnosis.	*Cannot gather or synthesize data to form an acceptable diagnosis. *Lacks basic medical knowledge to analyze patient data effectively	*Approaches assessment from a rigid template. *Struggles to filter, prioritize, and make connections between sources of information. *Proposes a differential diagnosis that is too narrow, is too broad, or contains inaccuracies. *Demonstrates difficulty retrieving knowledge for effective reasoning	*Gathers pertinent information from many sources in a hypothesis-driven fashion. *Filters, prioritizes, and makes connections between sources of information. *Proposes a relevant differential diagnosis that is neither too broad nor too narrow. *Organizes knowledge into illness scripts (patterns) that generate and support a diagnosis.

(b) Prioritize and continue to integrate information as it emerges to update differential diagnosis, while managing ambiguity.	*Disregards emerging diagnostic information. *Becomes defensive and/or belligerent when questioned on differential diagnosis	*Does not integrate emerging information to update the differential diagnosis. *Displays discomfort with ambiguity	*Seeks and integrates emerging information to update the differential diagnosis. *Encourages questions and challenges from patients and team.
(c) Engage and communicate with team members for endorsement and verification of the working diagnosis that will inform management plans.	*Ignores team's recommendations. *Develops and acts on a management plan before receiving team's endorsement. *Cannot explain or document clinical reasoning	*Recommends a broad range of untailored diagnostic evaluations. *Depends on team for all management plans. *Does not completely explain and document reasoning.	*Proposes diagnostic and management plans reflecting team's input. *Seeks assistance from team members. *Provides complete and succinct documentation explaining clinical reasoning

EPA 3: Recommend and Interpret Common Diagnostic and Screening Tests			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Recommend first-line, cost effective screening and diagnostic tests for routine health maintenance and common disorders.	*Unable to recommend a standard set of screening or diagnostic tests	*Recommends tests for common conditions *Does not consider harm, costs, guidelines, or patient resources *Does not consider patient-specific screening unless instructed	*Recommends key, reliable, and cost-effective screening and diagnostic tests. *Applies patient-specific guidelines.

(b) Provide rationale for decision to order tests, considering pre-and post-test probability and patient preference.	*Demonstrates frustration at cost containment efforts	*Recommends unnecessary tests or tests with low pre-test probability. *Neglects patient's preferences	*Provides individual rationale based on patient's preferences, demographics, and risk factors. *Incorporates sensitivity, specificity, and prevalence in recommending and interpreting tests. *Explains how results will influence diagnosis and evaluation.
(c) Interpret results of basic studies and understand the implication and urgency of the results.	*Cannot provide a rationale for ordering tests. *Can only interpret results based on normal values from the lab. *Cannot discern urgent from non-urgent results	*Misinterprets insignificant or explainable abnormalities. *Does not know how to respond to urgent test results. *Requires supervisor to discuss results with patient.	*Distinguishes common, insignificant abnormalities from clinically important findings. *Discerns urgent from non-urgent results and responds correctly. *Seeks help for interpretation of tests beyond scope of knowledge

EPA 4: Enter and Discuss Orders and Prescriptions			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Compose orders efficiently and effectively whether verbally, on paper, and electronically.	*Unable to compose or enter electronic orders or write prescriptions (or does so for the wrong patient or using an incorrect order set)	*Does not recognize when to tailor or deviate from the standard order set. *Orders tests excessively (uses shotgun approach). *May be overconfident, does not seek review of orders.	*Routinely recognizes when to tailor or deviate from the standard order set. *Able to complete complex orders requiring changes in dose or frequency over time (e.g., a taper). *Undertakes a reasoned approach to placing orders (e.g., waits for contingent results before ordering more tests). *Recognizes limitations and seeks helps.
(b) Demonstrate an understanding of the patient's condition that underpins the provided orders.	*Does not follow established protocols for placing orders. Lacks basic knowledge needed to guide orders. *Demonstrates defensiveness when questioned.	*Has difficulty filtering and synthesizing information to prioritize diagnostics and therapies. *Unable to articulate the rationale behind orders.	*Recognizes patterns and considers the patient's condition when ordering diagnostics and/or therapeutics. *Explains how test results influence clinical decision-making.

(c) Recognize and avoid errors by attending to patient-specific factors, using resources, and appropriately responding to safety alerts.	*Discounts information obtained from sources designed to avoid drug–drug interactions. *Fails to adjust doses when advised to do so by others. *Ignores alerts.	*Underuses information that could help avoid errors. *Relies excessively on technology to highlight drug–drug interactions and/or risks (e.g., smartphone or EHR suggests an interaction, but learner cannot explain relevance)	*Routinely practices safe habits when writing or entering prescriptions or orders. *Responds to EHR's (Electronic Health Record) safety alerts and understands rationale for them. *Uses electronic resources to fill in gaps in knowledge to inform safe order writing (e.g., drug–drug interactions, treatment guidelines).
(d) Discuss planned orders and prescriptions with team, patients, and families.	*Places orders and/or prescriptions that directly conflict with patient's and family's health or cultural beliefs	*Places orders without communicating with others. Uses unidirectional style ("Here is what we are doing..."). *Does not consider cost of orders or patient's preferences.	*Enters orders that reflect bidirectional communication with patients, families, and team. *Considers the costs of orders and the patient's ability and willingness to proceed with the plan

EPA 5: Document a Clinical Encounter in the Patient Records			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Prioritize and synthesize information into a cogent narrative for a variety of clinical encounters (e.g., admission, progress, pre-and post-op, and procedure notes; informed consent; discharge summary).	*Provides incoherent documentation	*Misses key information. *Uses a template with limited ability to adjust or adapt based on audience, context, or purpose	*Provides a verifiable, cogent narrative without unnecessary details or redundancies. *Adjusts and adapts documentation based on audience, context, or purpose (e.g., admission, progress, pre- and post-op, and procedure notes; informed consent; discharge summary).
(b) Follow documentation requirements to meet regulations and professional expectations.	*Copies and pastes information without verification or attribution. *Does not provide documentation when required	*Produces documentation that has errors or does not fulfill institutional requirements (e.g., date, time, signature, avoidance of prohibited abbreviations). *Has difficulty meeting turnaround expectations, resulting in team members' lack of access to documentation.	*Provides accurate, legible, timely documentation that includes institutionally required elements. *Documents team-care activities in patient's record. *Documents use of primary and secondary sources necessary to fill in gaps.

(c) Document a problem list, differential diagnosis, and plan supported through clinical reasoning that reflects patient's preferences.	*Provides illegible documentation. *Includes inappropriate judgmental language. *Documents potentially damaging information without attribution.	*Does not document a problem list, differential diagnosis, plan, clinical reasoning, or patient's preferences. *Interprets laboratory tests by relying on norms rather than context. *Does not include a rationale for ordering studies or treatment plans. *Demonstrates limited help-seeking behavior to fill gaps in knowledge or information.	*Documents a problem list, differential diagnosis, and plan, reflecting a combination of thought processes and input from other providers. *Interprets laboratory values accurately. *Identifies key problems, documenting engagement of those who can help resolve them. *Communicates bi-directionally to develop and record management plans aligned with patient's preference.

EPA 6: Provide an Oral Presentation of a Clinical Encounter			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Present personally gathered and verified information, acknowledging areas of uncertainty.	*Fabricates information when unable to respond to questions. *Reacts defensively when queried.	*Gathers incomplete evidence *Fails to verify information *Does not obtain sensitive information	*Presents personally verified and accurate information, even when sensitive. *Acknowledges gaps in knowledge, reflects on areas of uncertainty, and seeks additional information to clarify or refine presentation.

(b) Provide an accurate, concise, and well-organized oral presentation.	*Delivers presentations in a disorganized and incoherent fashion	*Delivers a presentation that is not concise and precise. *Presents a story that is imprecise because of omitted or extraneous information	*Filters, synthesizes, and prioritizes information into a concise and well-organized presentation. *Integrates pertinent positives and negatives to support hypothesis. *Provides sound arguments to support the plan.
(c) Adjust the oral presentation to meet the needs of the receiver.	*Presents information in a manner that frightens patient or patient's family.	*Follows a template. *Uses too many acronyms and medical jargon in patient presentations.	*Tailors length and complexity of presentation to situation and receiver of information. *Conveys appropriate self-assurance to put patient and family at ease.
(d) Demonstrate respect for patient's privacy and autonomy.	*Disregards patient's privacy and autonomy	*Lacks situational awareness when presenting sensitive patient information. *Does not engage patients and families in discussions of care	*Respects patients' privacy and confidentiality by demonstrating situational awareness. *Engages in shared decision making by actively soliciting patient's preference

EPA 7: Form Clinical Questions and Retrieve Evidence to Advance Patient Care			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Combine curiosity, objectivity, and scientific reasoning to develop a well-formed, focused, and pertinent clinical question (ASK).	*Does not reconsider approach to a problem, ask for help, or seek new information.	*With prompting, translates information needs into clinical questions.	*Identifies limitations and gaps in personal knowledge. *Develops knowledge guided by well-formed clinical questions.

(b) Demonstrates awareness and skill in using information technology to access accurate and reliable medical information (ACQUIRE).	*Declines to use new information technologies	*Develops knowledge guided by well-formed clinical questions. *Uses vague or inappropriate search strategies, leading to an unmanageable volume of information.	*Identifies and uses available databases, search engines, and refined search strategies to acquire relevant information.
(c) Demonstrate skill in appraising sources, content, and applicability of evidence (APPRAISE).	*Refuses to consider gaps and limitations in the literature or apply published evidence to specific patient care.	*Accepts findings from clinical studies without critical appraisal. *Unable to apply evidence to common medical conditions without assistance	*Uses levels of evidence to appraise literature and determines applicability of evidence. *Seeks guidance in understanding subtleties of evidence.
(d) Apply findings to individuals and/or patient panels; communicate findings to the patient and team, reflecting on process and outcomes (ADVISE).	*Does not discuss findings with team. *Does not determine or discuss outcomes and/or process, even with prompting.	*Communicates with rigid recitation of findings, using medical jargon or displaying personal biases. *Shows limited ability to connect outcomes to the process by which questions were identified and answered and findings were applied.	*Applies nuanced findings by communicating the level and consistency of evidence with appropriate citation. *Reflects on ambiguity, outcomes, and the process by which questions were identified and answered and findings were applied.

EPA 8: Give or Receive a Patient Handover to Transition Care Responsibility			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Document and update an electronic handover tool and apply this to deliver a structured verbal handover PBLI7 ICS2 ICS3 P3 *Transmitter.	*Inconsistently uses standardized format or uses alternative tool. *Provides information that is incomplete and/or includes multiple errors in patient information	*Uses and updates electronic handover tool inconsistently. *Requires clarification and additional relevant information from others to prioritize information. *Provides patient information that is disorganized, too detailed and/or too brief.	*Consistently updates electronic handover tool with clear, relevant, and succinct documentation. *Adapts and applies all elements of a standardized template. *Presents a verbal handover that is prioritized, relevant, and succinct.
(b) Conduct handover using communication strategies known to minimize threats to transition of care ICS2 ICS3 *Transmitter.	*Is frequently distracted. *Carries out handover with inappropriate timing and context.	*Requires assistance to minimize interruptions and distractions. *Demonstrates minimal situational awareness.	*Avoids interruptions and distractions. *Manages time effectively. *Demonstrates situational awareness.
(c) Provide succinct verbal communication conveying illness severity, situational awareness, action planning, and contingency planning ICS2 PC8 *Transmitter.	*Communication lacks all key components of standardized handover.	*Inconsistently communicates key components of the standardized tool. *Does not provide action plan and contingency plan.	*Highlights illness severity accurately. *Provides complete action plan and appropriate contingency plan.

(d) Give or elicit feedback about handover communication and ensure closed-loop communication PBLI5 ICS2 ICS3 *Transmitter and Receiver.	*Withholds or is defensive with feedback. *Displays lack of insight on the role of feedback. *Does not summarize (or repeat) key points for effective closed-loop communication.	*Delivers incomplete feedback or does not accept feedback when given. *Does not encourage other team members to express their ideas or opinions. *Inconsistently uses summary statements and/or asks clarifying questions.	*Provides and solicits feedback regularly, listens actively, and engages in reflection. *Identifies areas of improvement. *Asks mutually clarifying questions, provides succinct summaries, and uses repeat-back techniques.
(e) Demonstrate respect for patient's privacy and confidentiality P3 *Transmitter and Receiver.	*Is unaware of HIPAA policies. *Breaches patient confidentiality and privacy	*Is aware of HIPAA policies	*Consistently considers patient privacy and confidentiality. *Highlights and respects patient's preference

EPA 9: Collaborate as a Member of an Interprofessional Team			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Identify team members' roles and responsibilities and seek help from other members of the team to optimize health care delivery.	*Does not acknowledge other members of the interdisciplinary team as important. *Displays little initiative to interact with team members	*Identifies roles of other team members but does not know how or when to use them. *Acts independently of input from team members, patients, and families.	*Effectively partners as an integrated member of the team. *Articulates the unique contributions and roles of other health care professionals. *Actively engages with the patient and other team members to coordinate care and provide for seamless care transition.
(b) Include team members, listen attentively, and adjust communication content and style to align with team-member needs.	*Dismisses input from professionals other than physicians.	*Communication is largely unidirectional, in response to prompts, or template-driven. *Team participation is limited.	*Communicates bi-directional; keeps team members informed and up to date. *Adapts communication strategy to the situation.
(c) Establish and maintain a climate of mutual respect, dignity, integrity, and trust. **i. Prioritize team needs over personal needs to optimize delivery of care.** **ii. Help team members in need.**	*Has disrespectful interactions or does not tell the truth. *Is unable to modify behavior. *Puts others in the position of resolving interprofessional conflicts.	*Is typically a more passive member of the team. *Prioritizes own goals over those of the team.	*Supports other team members and communicates their value to the patient and family. *Anticipates, reads, and reacts to emotions to gain and maintain therapeutic alliances with others *Prioritizes team's needs over personal needs.

EPA 10: Recognize a Patient Requiring Urgent or Emergent Care and Initiate Evaluation and Management			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Recognize normal and abnormal vital signs as they relate to patient- and disease-specific factors as potential etiologies of a patient's decompensation.	*Fails to recognize trends or variations of vital signs in a decompensating patient.	*Demonstrates limited ability to gather, filter, prioritize, and connect pieces of information to form a patient-specific differential diagnosis in an urgent or emergent setting.	*Recognizes variations of patient's vital signs based on patient- and disease-specific factors. *Gathers, filters, and prioritizes information related to a patient's decompensation in an urgent or emergent setting.
(b) Recognize severity of a patient's illness and indications for escalating care and initiate interventions and management.	*Does not recognize change in patient's clinical status or seek help when a patient requires urgent or emergent care.	*Misses abnormalities in patient's clinical status or does not anticipate next steps. *May be distracted by multiple problems or have difficulty prioritizing. *Accepts help.	*Responds to early clinical deterioration and seeks timely help. *Prioritizes patients who need immediate care and initiates critical interventions.
(c) Initiate and participate in a code response and apply basic and advanced life support.	*Responds to a decompensated patient in a manner that detracts from or harms team's ability to intervene.	*Requires prompting to perform basic procedural or life support skills correctly. *Does not engage with other team members.	*Initiates and applies effective airway management, basic life support (BLS), and advanced cardiovascular life support (ACLS) skills. *Monitors response to initial interventions and adjusts plan accordingly. *Adheres to institutional procedures and protocols for escalation of patient care. *Uses the health care team members according to their roles and responsibilities to increase task efficiency in an emergent patient condition.

(d) Upon recognition of a patient's deterioration, communicate situation, clarify patient's goals of care, and update family members.	*Dismisses concerns of team members (nurses, family members, etc.) about patient deterioration. *Disregards patient's goals of care or code status.	*Communicates in a unidirectional manner with family and health care team. *Provides superfluous or incomplete information to health care team members. *Does not consider patient's wishes if they differ from those of the provider.	*Communicates bi-directionally with the health care team and family about goals of care and treatment plan while keeping them up to date. *Actively listens to and elicits feedback from team members (e.g., patient, nurses, family members) regarding concerns about patient deterioration to determine next steps.

EPA 11: Obtain Informed Consent for Tests and/or Procedure			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Describe the key elements of informed consent: indications, contraindications, risks, benefits, alternatives, and potential complications of the intervention.	*Lacks basic knowledge of the intervention. *Provides inaccurate or misleading information. *Hands the patient a form and requests a signature	*Is complacent with informed consent due to limited understanding of importance of informed consent. *Allows personal biases with intervention to influence consent process. *Obtains informed consent only on the directive of others	*Understands and explains the key elements of informed consent. *Provides complete and accurate information. *Recognizes when informed consent is needed and describes it as a matter of good practice rather than as an externally imposed sanction.

(b) Communicate with the patient and family to ensure that they understand the intervention.	*Uses language that frightens patient and family. *Disregards emotional cues. *Regards interpreters as unhelpful or inefficient.	*Uses medical jargon. *Uses unidirectional communication; does not elicit patient's preferences. *Has difficulty in attending to emotional cues. *Does not consider the use of an interpreter when needed	*Avoids medical jargon. *Uses bidirectional communication to build rapport. *Practices shared decision making, eliciting patient and family preferences. *Responds to emotional cues in real time. *Enlists interpreters collaboratively.
(c) Display an appropriate balance of confidence and skill to put the patient and family at ease, seeking help when needed.	*Displays overconfidence and takes actions that can have a negative effect on outcomes	*Displays a lack of confidence that increases patient stress or discomfort, or overconfidence that erodes trust. *Asks questions and accepts help.	*Demonstrates confidence commensurate with knowledge and skill so that patient and family are at ease. *Seeks timely help.

EPA 12: Perform General Procedure of a Physician			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Demonstrate technical skills required for the procedure.	*Lacks required technical skills. *Fails to follow sterile technique when indicated.	*Technical skills are variably applied. *Completes the procedure unreliably. *Uses universal precautions and aseptic technique inconsistently.	*Demonstrates necessary preparation for performance of procedures. *Correctly performs procedure on multiple occasions over time. *Uses universal precautions and aseptic technique consistently
(b) Understand and explain the anatomy, physiology, indications, contraindications, risks, benefits, alternatives, and potential complications of the procedure.	*Displays lack of awareness of knowledge gaps.	*Does not understand key issues in performing procedures, such as indications, contraindications, risks, benefits, and alternatives. *Demonstrates limited knowledge of procedural complications or alternatives.	*Demonstrates and applies working knowledge of essential anatomy, physiology, indications, contraindications, risks, benefits, and alternatives for each procedure. *Knows and takes steps to mitigate complications of procedures.
(c) Communicate with the patient and family to ensure they understand pre- and post-procedural activities.	*Uses inaccurate language or presents information distorted by personal biases. *Fails to obtain appropriate consent before performing a procedure. *Disregards patient's and family's wishes.	*Uses jargon or other ineffective communication techniques. *Does not read emotional response from the patient. *Does not engage patient in shared decision making	*Demonstrates patient-centered skills while performing procedures (avoids jargon, participates in shared decision making, considers patient's emotional response). *Having accounted for the patient's and family's wishes, obtains appropriate informed consent.

(d) Demonstrate confidence that puts patients and their families at ease.	*Displays overconfidence and takes actions that could endanger patients or providers.	*Displays a lack of confidence that increases patient's stress or discomfort, or overconfidence that erodes patient's trust. *Accepts help when offered.	*Seeks timely help. *Has confidence commensurate with level of knowledge and skill that puts patients and families at ease.

EPA 13: Identify System Failure and Contribute to a Culture of Safety and Improvement			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Identify and report actual and potential ("near miss") errors in care using system reporting structure (e.g., event reporting systems, chain of command policies).	*Reports errors in a disrespectful or misleading manner.	*Superficial understanding prevents recognition of real or potential errors.	*Identifies and reports patient safety concerns in a timely manner using existing system reporting structures (e.g., event reporting systems, chain of command policies). *Speaks up to identify actual and potential errors, even against hierarchy.
(b) Participate in system improvement activities in rotations or as learning experiences (e.g., rapid-cycle change using plan–do–study–act cycles, root cause analyses, morbidity and mortality conference, failure modes & effects analyses, improvement projects).	*Displays frustration at system improvement efforts.	*Passively observes system improvement activities in the context of rotations or learning experiences.	*Actively engages in efforts to identify systems issues and their solutions.

(c) Engage in daily safety habits (e.g., accurate & complete documentation, including allergies & adverse reactions, medicine reconciliation, patient education; and universal precautions such as hand washing, isolation protocols, falls & other risk assessments, standard prophylaxis, time-outs, etc).	*Places self or others at risk of injury or adverse event.	*Requires prompts for common safety behaviors.	*Engages in daily safety habits with only rare lapses.
(d) Admit one's own errors, reflect on one's contribution, and develop an individual improvement plan.	*Avoids discussing or reporting errors, attempts to cover up errors. *Demonstrates defensiveness or places blame on others.	*Requires prompts to reflect on own errors & underlying factors. *May not recognize own fatigue or may be afraid to tell supervisor when fatigued.	*Identifies and reflects on the element of personal responsibility for errors. *Recognizes causes of lapses, such as fatigue, and modifies behavior or seeks help.

EPA 14: Educate Patient and Promote the Health of the Community			
Key functions	**Behavior requiring corrective response**	**Developing behaviors**	**Required behaviors at graduation**
(a) Address community healthcare needs, environmental risks and resources	*Unable to identify and communicate with local communities. *Displays ignorance of the needs and risks faced by community.	*Identify challenges and present findings with evidence. *Prepare field visit report about healthcare condition in a community and come up with solutions.	*Engage with stakeholders to support strategic planning that addresses locally identified priorities. *Evaluate the impact and effectiveness of national /local health care programs.
(b) Provide health education and services to community to promote health equity, restore social justice and minimize effects of disparity	*Avoids participation in community awareness activities. *Poor interest in protecting the community and no participation in screening programs.	*Participate in health awareness programs, social activities for different strata of community such as children, women, elderly, etc, via publications, public conferences, workshops.	*Initiate and actively engage in health awareness campaigns, social activities for different strata of community such as children, women, elderly etc. *Support and expand technical capabilities of local health workers and organizations through publications, public conferences, workshops, volunteering with charitable organizations. *Develop policies and systems to promote equitable care.
(c) Identify and address special needs of different sections of society	*Does not participate in community initiatives.	*Work collaboratively as a team member to achieve goals of the community. *Participate in national and international screening programs. *Participate in healthcare programs for underserved sections of community.	*Demonstrate engagement with communities to provide and support population-centered preventive care to improve quality of life, especially for people with special needs and their families, and suggest strategic solutions through case study, projects, and publications. *Identifies and addresses ethical dilemmas in global health activities. *Actively organize and participate in national and international screening programs and perform research and propose solutions for community problems.

Chapter 4: List of Skills and Clinical Presentation

4.1 List of Skills

This chapter includes essential skills the medical graduate should acquire. Skills are classified into five categories.

1. **Basic Medical and General Aspects of Practical Skills:**
   - 1.1. Taking all necessary steps to prevent infection spread before, during, and after patient care.
   - 1.2. Use of personal protective measures (using gloves, gowns, and masks).
   - 1.3. Sterilization of equipment and solutions preparation.
   - 1.4. Safe disposal of clinical waste.
   - 1.5. Correct techniques for handling and moving patients including patient lifting and handling objects or people in the clinical care context using methods that help avoid injury to patients, oneself, or colleagues.

2. **Communication and Intellectual Skills:**
   - 2.1. Applying a consultation framework.
   - 2.2. Establishing & maintaining rapport with patients.
   - 2.3. Interviewing (history taking, information gathering).
   - 2.4. Imparting information to patients:
     - 2.4.1. Shared decision-making
     - 2.4.2. Disclosure, counseling, and patient education
     - 2.4.3. Getting an informed consent
     - 2.4.4. Breaking bad news
     - 2.4.5. Truth telling (admitting errors & mistakes)
   - 2.5. Communicating in writing:
     - 2.5.1. Writing patient's records
     - 2.5.2. Ordering investigations
     - 2.5.3. Prescribing
     - 2.5.4. Writing referral notes
     - 2.5.5. Writing discharge notes
     - 2.5.6. Certifying death
   - 2.6 Communicating electronically.
   - 2.7 Self-assessment and peer assessment.
   - 2.8 Effective communication with colleagues.
3. **Clinical Examination and Assessment Skills:**

3.1 General Examination Skills

3.1.1 Taking vital signs: cardiac/radial pulse, arterial blood pressure, respiration rate, and body temperature.

3.1.2 Measuring height, weight, head circumference and evaluating on a percentile scale.

3.1.3 Calculating and evaluating Body Mass Index (BMI).

3.1.4 General physical examination techniques including inspection, palpation, percussion, auscultation.

3.2 Systemic Examination Skills

3.2.1 Abdominal examination.

3.2.2 Anterior rhinoscopy.

3.2.3 Breast examination.

3.2.4 Cardiovascular examination.

3.2.5 Examination of lymphatic system.

3.2.6 Examination of mouth and throat.

3.2.7 Examination of thyroid gland.

3.2.8 Genitalia examination.

3.2.9 Gynecological examination, including speculum examination.

3.2.10 Hearing tests.

3.2.11 Mental examination.

3.2.12 Musculoskeletal examination.

3.2.13 Neck examination.

3.2.14 Neurological examination.

3.2.15 Ophthalmoscopic examination.

3.2.16 Otoscopic examination.

3.2.17 Performing peripheral vascular examination.

3.2.18 Preparing peripheral blood smear.

3.2.19 Prostate examination.

3.2.20 Rectal examination.

3.2.21 Respiratory examination.

3.2.22 Upper and lower extremities examination.

3.3 Assessment Skills

3.3.1 Antenatal assessment.

3.3.2 Post-natal assessment.

3.3.3 Following growth and development in children.

3.3.4 Differentiating normal and abnormal ECG.

3.3.5 Identifying the areas and techniques of radiographs.

3.3.6 Assessing chest radiographs.

3.3.7 Assessing skeletal radiographs.

3.3.8 Assessing plain abdominal radiographs.
3.3.9 Assessing visual fields.
3.3.10 Assessing APGAR score.
3.3.11 Assessing infant respiratory distress.
3.3.12 Assessing infant/child dehydration.
3.3.13 Assessing fundal height.
3.3.14 Assessing suicidal risk.
3.3.15 Identifying papilledema.
3.3.16 Identifying focal neurological signs.
3.3.17 Estimating Glasgow Coma Score.
3.3.18 Selecting appropriate laboratory and other diagnostic tests.
3.3.19 Assessing common laboratory results (normal versus pathological).
3.3.20 Planning prevention of communicable diseases in the community.
3.3.21 Nutritional assessment.
3.3.22 Using Snellen's chart for vision assessment.
3.3.23 Color vision assessment by Ishihara Color Vision Test.
3.3.24 Identifying the cause of death correctly.

4. Diagnostic Procedural Skills:

4.1 Performing arterial puncture for blood gas.
4.2 Performing capillary blood sampling.
4.3 Performing an electrocardiograph (ECG).
4.4 Performing basic respiratory function tests.
4.5 Performing eye irrigation.
4.6 Irrigating external auditory canal.
4.7 Performing removal of corneal foreign body.
4.8 Inserting anterior nasal pack.
4.9 Advising patients on how to obtain a sample of urine.
4.10 Drawing venous blood, venous access.
4.11 Testing blood groups.
4.12 Collecting a swab.
4.13 Collecting samples for occult blood in feces.
4.14 Performing pregnancy testing.
4.15 Observing lumbar puncture.
4.16 Observing peritoneocentesis (ascitic tap).
4.17 Performing peak flow measurement.
4.18 Performing PAP smear.
4.19 Performing PPD.
4.20 Using microscope.

4.21 Observing bleeding and clotting time.
4.22 Urinalysis (by dipstick) and urine microscopic examination.
4.23 Measuring blood sugar by glucometer.
4.24 Taking samples for cultures (throat, urine, blood, cervix, etc).
4.25 Managing blood samples.
4.26 Taking blood cultures.

5. Therapeutic Procedural Skills:

5.1 Performing IV injection and administering IV therapy.
5.2 Performing IM injection.
5.3 Performing intradermal injection.
5.4 Performing subcutaneous injection.
5.5 Performing trauma emergency including:
5.5.1
5.6 Performing primary trauma survey.
5.7 Applying cervical collar.
5.8 Performing volume resuscitation (including blood transfusion).
5.9 Performing handling of unconscious patient.
5.10 Applying plaster & immobilizing joints.
5.11 Performing enema.
5.12 Performing wound care.
5.13 Performing basic burn care.
5.14 Performing basic suturing.
5.15 Performing incision and drainage of abscess.
5.16 Performing first aid.
5.17 Performing peripheral puncturing of a patient's vein.
5.18 Observing blood transfusion (preparation for blood transfusion).
5.19 Performing bleeding control by pressure and tourniquet.
5.20 Performing basic restraint for extremities, elastic bandage.
5.21 Performing stabilizing and restraining neck and spine.
5.22 Recognizing and relieving an obstructed airway.
5.23 Performing basic cardiac life support.
5.24 Performing cleaning foreign body, placing airway, Heimlich maneuver.
5.25 Observing defibrillation.
5.26 Observing endotracheal intubation.
5.27 Observing tracheostomy & chest tube insertion.
5.28 Performing nasogastric tube insertion.
5.29 Performing gastric lavage.
5.30 Performing bladder catheterization (male and female).
5.31 Performing normal vaginal delivery.

5.32 Performing assisted vaginal delivery.
5.33 Fabricate drugs for preparing medicine forms that suit intravenous parenteral administration injection.
5.34 Performing dosage calculation and medication administration.
5.35 Showing rational prescribing skills.
5.36 Calculating the correct units of insulin and use of the sliding scales a patient requires, the strength of insulin solution to be used, and how to be used.
5.37 Instructing patients on the correct use of inhalers.
5.38 Performing nebulizer treatment.
5.39 Using of local anesthetics.
5.40 Performing appropriate aftercare and appropriately after procedure.
5.41 Providing guidance for and follow-up of contraception practices.
5.42 Performing guidance for breastfeeding.
5.43 Planning nutrition according to age.
5.44 Immunization assessment: advice and decision-making.

4.2 Clinical Presentation

This section includes most of the common and important clinical presentations the medical graduates should be oriented with. It is subdivided into lists presenting all the systems of the human body within which related common clinical presentations are alphabetically arranged.

Musculoskeletal System

- Ankle and foot pain
- Back pain
- Bone pain/tenderness
- Buttock, hip, and thigh pain
- Calf pain
- Coccydynia (pain in the coccyx)
- Foot deformities
- Foot pain/foot ulcers
- Fracture
- Hand deformities
- Joint deformities
- Joint displacement
- Joint pain/tenderness
- Joint stiffness
- Leg swelling
- Muscle weakness
- Muscular pain/tenderness
- Neck pain
- Paralysis & paresis
- Popliteal swellings
- Shoulder pain
- Swollen joints

Respiratory system

- Abnormal breathing sounds
- Abnormal breathing/labored breathing
- Apnea
- Chest pain
- Cough
- Daytime sleepiness
- Hemoptysis
- Wheeze

Cardiovascular system

- Altered heart sound
- Chest pain
- Cyanosis
- Dyspnea/Orthopnea
- Dysrhythmias
- Edema
- Hypertension
- Hypotension
- Palpitation
- Parasternal heave & thrill
- Xanthelasma

Genito-Urinary System

- Ambiguous genitalia
- Disturbances of micturition – frequency, polyuria, anuria, oliguria, dribbling, incontinence, urgency
- Dysmenorrhea
- Dysuria
- Empty scrotum
- Erectile dysfunction
- Genital lumps, ulcers, rashes
- Haematuria
- Impotence/loss of libido
- Infertility
- Pain – renal, ureteric, urethral/ flank Pain
- Pelvic pain and dyspareunia
- Penile congenital anomalies
- Premature ejaculation
- Retention of urine
- Scrotal mass
- Scrotal pain

Nervous System & Mental Health

- Abnormal behaviors
- Abnormal gait
- Acute confusion status
- Altered cognitive status
- Altered consciousness
- Anxiety
- Delusion and thought disorders
- Depressed mood
- Disturbed sensation
- Dizziness, vertigo, and lightheadedness
- Faints
- Fits
- Hallucination
- Headache
- Hemiplegia
- Illusion
- Insomnia
- Memory loss
- Neuropathic pain
- Personality problems
- Phobia
- Tremor and other abnormal movements

Paediatric Growth & Development

- Abnormal Changes in stature
- Abnormal development
- Child abuse
- Failure to thrive
- Well-child and anticipatory care

GI System

- Abdominal pain
- Abdominal swelling
- Abnormal tongue appearance
- Anorectal pain
- Anorectal swelling
- Ascites

- Changes in appetite
- Constipation
- Diarrhea
- Dyspepsia
- Dysphagia
- Fecal incontinence
- Gynecomastia
- Halitosis
- Heartburn
- Hematemesis
- Hepatomegaly
- Jaundice
- Melena
- Nausea and vomiting
- Rectal bleeding
- Splenomegaly

Ophthalmology

- Diplopia
- Dry eye
- Excessive tearing
- Eye discharge
- Eye pain
- Eye twitch
- Eyelid swelling
- Leukocoria
- Nystagmus
- Ptosis
- Pupillary problems
- Red eye
- Squint
- Visual disturbances

Endocrine System

- Delayed or Precocious puberty
- Gynecomastia
- Impotence
- Loss or absence of libido
- Polydipsia
- Polyuria
- Protrusion of eyes
- Short stature & tall stature
- Tiredness/General weakness

Dermatology

- Bruising
- Clubbing
- Hair abnormalities
- Itching
- Lip ulcers/Lip pigmentations
- Nail changes
- Pallor
- Pigmentation disorder
- Redness of skin
- Skin rashes
- Skin ulcers
- Soft tissue swellings
- Swelling of skin
- Wounds

Womens' Health

- Abnormal fundal height during pregnancy
- Abnormal vaginal bleeding
- Abuse: physical, psychological & sexual
- Breast complaints: pain, lumps, and discharge
- Menstrual disturbances
- Vaginal discharge and irritation

Otolaryngology

- Ear discharge
- Ear pain
- Epistaxis
- Facial swelling

- Hearing disturbances/Deafness
- Hoarseness/Voice disorders
- Nasal discharge
- Neck swelling
- Oral ulcers
- Sneezing
- Snoring
- Sore throat
- Speech difficulties
- Stridor
- Tinnitus

Miscellaneous

- Abnormal weight change
- Axillary swelling
- Chills/Rigors
- Excessive sweating/Night sweats
- Fatigue and lethargy
- Fever
- Hirsutism
- Hypothermia
- Injury to different organs
- Lymph node enlargement
- Weather intolerance

Chapter 5: Implementation and Future Developments

The Implementation Plan for this Framework was drafted through an interactive workshop held in April 2022 where all institutions participated. The EmiratesMEDs Competency Framework will be launched at all medical colleges of the UAE during the academic year 2022-2023 after the World Federation of Medical Education (WFME) has been notified.

The Taskforce plans on conducting multiple rounds of workshops to train faculty on the implementation of this Framework. However, once launched, the responsibility for monitoring continuous implementation with the Commission for Academic Accreditation.

Stakeholder feedback to refine and enhance implementation will be collected on an annual basis along with regular professional development activities. Strategic collaboration between medical schools in the UAE and those in other countries where frameworks have been successfully implemented will be planned periodically to establish a robust support network for knowledge and experience sharing.

Technical and procedural support will be provided to individual colleges based on request. While the implementation of this Framework will be mandatory for all medical schools, universities will be encouraged to create their own unique mechanisms for incorporating it into their curricula at their discretion.

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Appendix 1: Alignment with Other Frameworks

Alignment with QF-Emirates

EmiratesMEDs	QF-Emirates
Medical Expert	Knowledge
Evidence-based practitioner and scholar	
Patient and population-centered care provider	Skills
Communicator	
System-based healthcare advocate	
Professional	Aspects of competence
Collaborator, innovator, and leader	
Self and profession enhancer	
Socially accountable	

Alignment with QF-Emirates with perceived weight

EmiratesMEDs	QF-Emirates	**Perceived weight** **(based on time required for mastery)**
Medical Expert	Knowledge	To be calculated by institution
Evidence-based practitioner and scholar		
Patient and population-centered care provider	Skills	To be calculated by institution
Communicator		
System-based healthcare advocate		
Professional	Aspects of competence	To be calculated by institution
Collaborator, innovator, and leader		
Self and profession enhancer		
Socially accountable		

Alignment with CanMEDS

EmiratesMEDs	CanMEDs
Medical Expert	Medical Expert
Evidence-based practitioner and scholar	Scholar
Patient and population-centered care provider	Medical Expert
Communicator	Communicator
System-based healthcare advocate	--
Professional	Professional
Collaborator, innovator, and leader	Collaborator, Leader
Self and profession enhancer	--
Socially accountable	Health Advocate

Alignment with ACGME and PCRS of AAMC

EmiratesMEDs	ACGME	PCRS of AAMC
Medical Expert	Medical Knowledge	Medical Knowledge
Evidence-based practitioner and scholar	Practice-based learning and improvement	Practice-based learning and improvement
Patient and population-centered care provider	Patient care	Patient care
Communicator	Interpersonal communication skills	Interpersonal communication skills
System-based healthcare advocate	Systems-based practice	Systems-based practice
Professional	Professionalism	Professionalism
Collaborator, innovator, and leader	--	Interprofessional collaboration.
Self and profession esnhancer	--	Personal and professional development.
Socially accountable	--	--

Appendix 2: Comparison of Existing Frameworks

ACGME Competencies

1. Patient Care
2. Medical Knowledge
3. Interpersonal and Communication Skills
4. Professionalism
5. Practice-Based Learning & Improvement
6. System-Based Practice

Link: https://www.acgme.org/newsroom/2020/9/guidance-statement-on-competency-based-medical-education-during-covid-19-residency-and-fellowship-disruptions/

GMC Generic Professional Capabilities Framework

1. Domain 1: Professional Values and Behaviors
2. Domain 2: Professional Skills
3. Domain 3: Professional Knowledge
4. Domain 4: Capabilities in Health Promotion and Illness Prevention
5. Domain 5: Capabilities in Leadership and Team Working
6. Domain 6: Capabilities in Patient Safety and Quality Improvement
7. Domain 7: Capabilities in Safeguarding Vulnerable Groups
8. Domain 8: Capabilities in Education and Training
9. Domain 9: Capabilities in Research and Scholarship.

Link: https://www.gmc-uk.org/-/media/documents/generic-professional-capabilities-framework--2109_pdf-70417127.pdf

Outcomes for Graduates 2009

1. Outcomes 1 – Professional Values and Behaviors
   i. Professional and Ethical Responsibilities
   ii. Legal Responsibilities
   iii. Patient Safety and Quality Improvement
   iv. Dealing with Complexity and Uncertainty
   v. Safeguarding Vulnerable Patients
   vi. Leadership and Team Working
2. Outcomes 2 – Professional Skills
   i. Communication and Interpersonal Skills
   ii. Diagnosis and Medical Management
   iii. Prescribing Medications Safely
   iv. Using Information Effectively and Safely
3. Outcomes 3 – Professional Knowledge
   i. The health service and healthcare systems in the four countries
   ii. Applying biomedical scientific principles
   iii. Applying psychological principles
   iv. Applying social science principles
   v. Health promotion and illness prevention
   vi. Clinical research and scholarship

Link: https://www.gmc-uk.org/-/media/documents/outcomes-for-graduates-2020_pdf-84622587.pdf

CANMed 2005

1. Medical Expert (The integrating role)
2. Communicator
3. Collaborator
4. Leader
5. Health Advocate
6. Scholar
7. Professional

Link: https://www.royalcollege.ca/rcsite/canmeds/canmeds-framework-e

SaudiMed Framework

1. Scientific Approach to Practice
2. Patient Care
3. Community-Oriented Practice
4. Communication and Collaboration
5. Professionalism
6. Research and Scholarship

Link: https://www.slideshare.net/ghaiath/saudimed-framework-2016

Medical School Objective Project by AAMC 1998

1. Physicians must be altruistic
2. Physicians must be knowledgeable
3. Physicians must be skillful
4. Physicians must be dutiful

Link: https://www.aamc.org/system/files/c/2/492708-learningobjectivesformedicalstudenteducation.pdf

SCOTISH DOCTORS 2000

1. Clinical Skills
2. Practical Procedures
3. Patient Investigation
4. Patient Management
5. Health Promotion and Disease Prevention
6. Communication
7. Medical Informatics
8. Basic, social, and clinical sciences and underlying principles
9. Attitudes, ethical understanding, and legal responsibilities
10. Decision Making Skills and Clinical Reasoning and Judgement
11. The Role of the Doctor Within the Health Service
12. Personal Development

Link: http://www.ub.edu/medicina_unitateducaciomedica/documentos/Scottish%20Doctor.pdf

Learning Outcomes/Competencies for Undergraduate Medical Education in Europe.
The Tuning Project (Medicine) 2004

1. 'Carry out a consultation with a patient'
2. Assess clinical presentations, order investigations, make differential diagnosis, and negotiate a management plan.
3. 'Provide immediate care of medical emergencies, including First Aid and resuscitation
4. 'Prescribe drugs'
5. 'Carry out practical procedures'
6. 'Communicate effectively in a medical context'
7. 'Apply ethical and legal principles in medical practice'
8. 'Assess psychological and social aspects of a patient's illness'
9. 'Apply the principles, skills and knowledge of evidence-based medicine'
10. 'Use information and information technology effectively in a medical context'
11. 'Ability to apply scientific principles, method and knowledge to medical practice and research' personal development
12. 'Promote health, engage with population health issues and work effectively in a health care system'
13. Professional attributes
14. Professional working
15. The doctor as expert
16. The global doctor

Link: https://www.unideusto.org/tuningeu/images/stories/Summary_of_outcomes_TN/Learning_Outcomes_Competences_for_Undergraduate_Medical_Education_in_Europe.pdf

International Medical College Outcomes (Malaysia)

1. Application of basic sciences in the practice of the profession
2. Psychomotor Skills
3. Family and community issues in healthcare
4. Disease prevention and health promotion
5. Communication skills
6. Critical thinking, problem-solving and research
7. Self-directed life-long learning with skills in information and resource management
8. Professionalism, ethics and personal development

Link: https://www.healthcarestudies.com/universities/Malaysia/International-Medical-University/

Global Minimum Essential Requirements in Medical Education 2002

1. Professional values, attitudes, behavior and ethics
2. Scientific foundations of medicine
3. Clinical skills
4. Communication skills
5. Population health and health systems
6. Management of information
7. Critical thinking and research

Link: https://pubmed.ncbi.nlm.nih.gov/12098431/

The Royal Australasian College of Physicians

1. Medical Expertise
2. Communication
3. Quality and Safety
4. Teaching and Learning
5. Research
6. Cultural Competence
7. Ethics and Professional Behavior
8. Judgement and Decision Making
9. Leadership, Management, and Teamwork
10. Health Policy, Systems, and Advocacy

Link: https://www.racp.edu.au/trainees/basic-training/curricula-renewal/standards/competencies

Appendix 3: Competencies Mapped with EPAs

THEMATIC ROLE 1: MEDICAL EXPERT

CORE COMPETENCY: Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and psycho-social sciences, as well as the application of this knowledge to patient and population care through the clinical reasoning approach.

THEMATIC ROLE 1 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	EPA 7 Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: ME 1 Demonstrate an investigatory and analytic approach to clinical situations.		X	X			X								
Comp. Code: ME 2 Apply established and emerging biophysical principles fundamental to health care.	X	X	X	X		X	X						X	X
Comp. Code: ME 3 Apply established and emerging principles of clinical sciences to diagnostic and therapeutic decision making.		X	X	X			XXX					X		

THEMATIC ROLE 1 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	EPA 7 Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: ME 4 Apply principles of epidemiology to the identification of health problems, risk factors, treatment strategies, resources, health system development, and disease prevention/health promotion efforts.													**X**	**XXX**
Comp. Code: ME 5 Apply principles of social-behavioral sciences to provision of health care, including assessment of the impact of psychosocial-cultural influences on health, disease, care-seeking, care-compliance, etc.	**X**			**X**										**XXX**
Comp. Code: ME 6 Contribute to the creation, dissemination, application, and translation of new health care knowledge and practices.							**X**						**X**	

THEMATIC ROLE 1 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	EPA 7 Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: ME 7 Demonstrate an ability to manage infodemic while respecting cultural, social values and legislation in UAE.													**X**	**X**

THEMATIC ROLE 2: EVIDENCE-BASED PRACTITIONER AND SCHOLAR

CORE COMPETENCY: Demonstrate the ability to continuously improve through self-evaluation and lifelong learning and to investigate and evaluate patient care using an evidence-based approach gathered from high quality research, practitioner experience and based on value to the patient while considering the context of care.

THEMATIC ROLE 2 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presenta	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: EBS 1 Systematically analyze practice using quality-improvement methods and implement changes with the goal of practice improvement							**xxx**						**X**	

THEMATIC ROLE 2 Competency Code & Enabling Competencies	**History**	**EPA 2 Differential Diagnosis**	**EPA 3 Investigations**	**4 Management**	**Records**	**EPA 6 Oral Presenta**	**Evidence Based Medicine**	**8 Handover**	**9 Collaboration**	**Emergency Response**	**Informed Consent**	**Procedural**	**Health Systems**	**Community**
Comp. Code: EBS 2 Incorporate feedback into daily practice							**xxx**							
Comp. Code: EBS 3 Ask, acquire, appraise, apply, and assess evidence from scientific studies related to patients' health problems							**xxx**							
Comp. Code: EBS 4 Demonstrate use of information technology systems and health informatics to support evidenced-based care					**xxx**									
Comp. Code: EBS 5 Obtain and utilize information about individual patients, populations of patients, or communities from which patients are drawn to improve care.					**X**		**X**							

THEMATIC ROLE 2 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presenta	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: EBS 6 Continually identify, analyze, and implement new knowledge, guidelines, standards, technologies, products, or services that have been demonstrated to improve outcomes.							**X**						**X**	
Comp. Code: EBS 7 Demonstrate knowledge management and translation ability for improvement of patient and population care and the health system.							**X**	**X**						
Comp. Code: EBS 8 Demonstrate ability to conduct research following scientific approach including writing a proposal, implementing research, writing a manuscript, and disseminating findings guided by research ethics.							**X**							

THEMATIC ROLE 3: PATIENT CARE PROVIDER AND HEALTH ADVOCATE

CORE COMPETENCY: Provide patient-and population-centered care that is compassionate, appropriate, and effective for the management and prevention of common health problems; and advocate patient rights and patient safety.

THEMATIC ROLE 3 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: PC 1 Perform all medical, diagnostic, and surgical procedures considered essential for the area of practice as a generalist.										X	X	X		
Comp. Code: PC 2 Gather essential and accurate information about patients and their condition through a clinical reasoning approach.	X	X	X	X										
Comp. Code: PC 3 Organize and prioritize responsibilities to provide care that is safe, effective, and efficient.				X			X						X	

THEMATIC ROLE 3 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: PC 4 Interpret laboratory data, imaging studies, and other tests required for the area of practice as a generalist.		X	X											
Comp. Code: PC 5 Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment		X		X			X							
Comp. Code: PC 6 Develop and carry out effective and appropriate patient management plans				X				X	X	X	X	X		

THEMATIC ROLE 3 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: PC 7 Counsel and educate patients and their families to empower them to participate in their care and enable shared decision making.			X	X							X			X
Comp. Code: PC 8 Provide appropriate referral of patients, including ensuring continuity of care throughout transitions between providers and following up on patient progress and outcomes				X	X			X	X					
Comp. Code: PC 9 Provide health care services to patients, families, and communities aimed at preventing health problems or maintaining health				X									X	X

THEMATIC ROLE 3 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: PC 10 Advocate for health through appropriate health promotion strategies and interventions grounded in social determinants of health.				**X**									**X**	**X**
Comp. Code: PC 11 Participate in the education of patients, families, students, trainees, peers, and other health professionals.						**X**			**X**					**X**

THEMATIC ROLE 4: COMMUNICATOR

CORE COMPETENCY: Demonstrate written, verbal, and non-verbal interpersonal communication skills that result in effective interactions with patients, their families, and health professionals.

THEMATIC ROLE 4 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	EPA 13 Health Systems	Community
Comp. Code: C1 Communicate effectively with patients and public across a broad range of socioeconomic and cultural backgrounds	x					x					x			x
Comp. Code: C2 Demonstrate effective therapeutic relationships with patients and their families that facilitate the gathering and sharing of essential information and developing care plans.	x			x									x	x
Comp. Code: C3 Communicate effectively with colleagues, other health professionals, and health-related agencies						x		x	x				x	x

THEMATIC ROLE 4 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	EPA 13 Health Systems	Community
Comp. Code: C4 Work effectively with others as a member or leader of a health care team.						x		x	x	x			x	
Comp. Code: C5 Demonstrate ability to act in a consultative role to other health professionals				x		x		x	x					
Comp. Code: C6 Document and share comprehensive, timely and relevant written and electronic information to optimize clinical decision-making, patient safety, confidentiality, and privacy			x	x	x	x		x	x	x	x			
Comp. Code: C7 Demonstrate sensitivity, honesty, and compassion in difficult conversations.	x			x				x	x	x	x	x		

THEMATIC ROLE 4 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	EPA 13 Health Systems	Community
Comp. Code: C8 Demonstrate insight and understanding about emotions and human responses to emotions.	x			x		x		x	x	x	x			
Comp. Code: C9 Demonstrate the ability to prevent and resolve interprofessional team conflicts.								x	x	x				

THEMATIC ROLE 5: COLLABORATOR, INNOVATOR & LEADER

CORE COMPETENCY: Demonstrate the ability to collaborate and lead a health team and actively engage in an interprofessional health team in a manner that optimizes safe, effective patient and population-centered care

THEMATIC ROLE 5 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: CIL 1 Work with other health professionals to establish and maintain a climate of mutual respect, dignity, diversity, ethical integrity, and trust.				x				x	x					
Comp. Code: CIL 2 Use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of patients and populations.				x			x		x				x	x

THEMATIC ROLE 5 Competency Code & Enabling Competencies	EPA 1 History	EPA 2 Differential Diagnosis	EPA 3 Investigations	EPA 4 Management	EPA 5 Records	EPA 6 Oral Presentation	EPA 7 Evidence Based Medicine	EPA 8 Handover	EPA 9 Collaboration	EPA 10 Emergency Response	EPA 11 Informed Consent	EPA 12 Procedural	EPA 13 Health Systems	EPA 14 Community
Comp. Code: CIL 3 Communicate with other health professionals in a responsive and responsible manner that supports the maintenance of health and the treatment of disease in individual patients and populations.				x		x		x	x				x	x
Comp. Code: CIL 4 Participate in different team roles to establish, develop, and continuously enhance interprofessional teams to provide patient- and population-centered care that is safe, timely, efficient, effective, and equitable.				x		x	x	x	x				x	x

THEMATIC ROLE 5 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: CIL 5 Demonstrate leadership skills that enhance team functioning, the learning environment, and/or the healthcare delivery system						x		x	x	x			x	x
Comp. Code: CIL 6 Propose creative and innovative initiatives and solutions to priority health problems							x						x	x
Comp. Code: CIL 7 Promote entrepreneurship and sustainability as cost-effective strategies to meet the health needs of the population in UAE.							x		x				x	x

THEMATIC ROLE 6: PROFESSIONAL

CORE COMPETENCY: Carry out professional responsibilities and activities through demonstration of commitment and adherence to ethical principles

THEMATIC ROLE 6 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: P1 Demonstrate compassion, integrity, and respect for others.	x		x	x	x	x		x	x	x	x	x		x
Comp. Code: P2 Demonstrate responsiveness to patient needs that supersedes self-interest.	x		x	x				x	x	x	x			x
Comp. Code: P3 Demonstrate respect for patient privacy and autonomy.	x		x	x	x	x		x	x	x	x			x
Comp. Code: P4 Demonstrate accountability to patients, society, and the profession as role-models.	x			x		x		x	x	x	x	x		x

THEMATIC ROLE 6 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: P5 Demonstrate sensitivity and responsiveness to a diverse patient population in UAE, including but not limited to diversity in gender, age, culture, race, religion, disabilities.	x	x	x	x	x	x		x	x	x	x	x	x	x
Comp. Code: P6 Demonstrate a commitment to ethical principles pertaining to provision of care, confidentiality, informed consent, and business practices, including compliance with relevant national laws, policies, and regulations.	x		x	x	x						x	x	x	x
Comp. Code: P7 Exhibit professional behaviors in the use of technology-enabled communication including social media.					x	x		x					x	x

THEMATIC ROLE 6 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: P8 Recognize and respond to unprofessional and unethical behaviors in physicians and other colleagues in the health care professions.									x	x			x	
Comp. Code: P9 Recognize and manage conflict of interest.									x				x	
Comp. Code: P10 Exhibit self-awareness and manage influences on personal well-being and professional performance.														
Comp. Code: P11 Manage personal and professional demands for a sustainable practice throughout the physician life cycle.														

THEMATIC ROLE 6 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: P12 Promote a culture that recognizes, supports, and responds effectively to colleagues in need.									x				x	
Comp. Code: P13 Develop a professional identity acknowledging a commitment to health and well-being of patients, families, society, and peers.									x				x	x

THEMATIC ROLE 7: SYSTEM-BASED HEALTHCARE ADVOCATE

CORE COMPETENCY: Demonstrate an awareness of and responsiveness to the larger context and system of health care in UAE, as well as use resources effectively to contribute to the development of the system to provide optimal health care.

THEMATIC ROLE 7 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: HS 1 Work effectively in various health care delivery settings and systems relevant to one's clinical specialty.									x				x	x
Comp. Code: HS 2 Coordinate patient care within the health care system relevant to one's clinical specialty.				x			x						x	
Comp. Code: HS 3 Incorporate considerations of cost awareness and risk-benefit analysis in patient- and/or population-based care.			x	x			x						x	x

THEMATIC ROLE 7 Competency Code & Enabling Competencies	**History**	**EPA 2 Differential Diagnosis**	**EPA 3 Investigations**	**4 Management**	**Records**	**EPA 6 Oral Presentation**	**Evidence Based Medicine**	**8 Handover**	**9 Collaboration**	**Emergency Response**	**Informed Consent**	**Procedural**	**Health Systems**	**Community**
Comp. Code: HS 4 Advocate for quality patient care and optimal patient care systems.				**x**			**x**		**x**				**x**	**x**
Comp. Code: HS 5 Participate in identifying system errors and implementing potential systems solutions.													**x**	
Comp. Code: HS 6 Perform administrative and practice management responsibilities commensurate with one's role, abilities, and qualifications.			**x**	**x**								**x**	**x**	
Comp. Code: HS 7 Utilize technology and systems responsibly and effectively, maintaining security, ensuring currency, and proposing improvement.			**x**	**x**			**x**						**x**	

THEMATIC ROLE 7 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: HS 8 Devise and contribute to the development of innovative approaches to improving access and quality of care.							x		x				x	x
Comp. Code: HS 9 Describe national health care systems including their organization, financing, health insurance, policies, and procedures.							x						x	x

THEMATIC ROLE 8: SELF AND PROFESSION ENHANCER

CORE COMPETENCY: Demonstrate the qualities required to sustain lifelong learning and growth of the profession.

THEMATIC ROLE 8 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 nagement	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: SPE 1 Demonstrate the ability to use self-awareness of knowledge, skills, and emotional wellbeing to engage in appropriate help-seeking behaviors.				x		x						x		
Comp. Code: SPE 2 Demonstrate resilience and healthy coping mechanisms to respond to stress.						x			x	x		x		
Comp. Code: SPE 3 Manage conflict between personal and professional responsibilities.									x					
Comp. Code: SPE 4 Practice flexibility and maturity in adjusting to change with the capacity to alter behavior.									x					

THEMATIC ROLE 8 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 nagement	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: SPE 5 Demonstrate trustworthiness that makes colleagues feel secure when one is responsible for the care of patients.									x					
Comp. Code: SPE 6 Demonstrate self-confidence that puts patients, families, and members of the health care team at ease.	x			x					x	x		x		
Comp. Code: SPE 7 Recognize that ambiguity is part of clinical health care and respond by using appropriate resources in dealing with uncertainty.		x		x			x			x			x	
Comp. Code: SPE 8 Identify strengths, deficiencies, and limits in one's knowledge and expertise									x					

THEMATIC ROLE 8 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 nagement	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: SPE 9 Set learning and improvement goals									**x**					
Comp. Code: SPE 10 Identify and perform learning activities that address one's gaps in knowledge, skills, or attitudes.							**x**		**x**					
Comp. Code: SPE 11 Manage personal and professional demands for a sustainable practice throughout the physician life cycle.													**x**	
Comp. Code: SPE 12 Promote a culture that recognizes, supports, and responds effectively to colleagues in need.									**x**				**x**	

THEMATIC ROLE 9: SOCIALLY ACCOUNTABLE

CORE COMPETENCY: Meet the health needs of patients and society, demonstrate improved health outcomes, and promote health equity, relevance, collaboration, cost-effectiveness, and quality

THEMATIC ROLE 9 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: SA 1 Demonstrate an understanding of the influence and potential implications of social determinants of health on beliefs, behaviors, and outcomes, and incorporate this knowledge into patient care.				x			x						x	x
Comp. Code: SA 2 Identify and utilize appropriate sources of information to analyze significant public health issues, applying data to reach defensible conclusions.			x				x						x	x

THEMATIC ROLE 9 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: SA 3 Accurately describe the organization and basic financial models of the UAE healthcare system and potential impact of this system on patients.													x	x
Comp. Code: SA 4 Accept and report personal biases and errors, identify potential sources of errors, and develop action plans to reduce risk of future errors.													x	x
Comp. Code: SA 5 Collaborate with stakeholders inside and outside the health care system to coordinate optimal care and improve health.													x	x

THEMATIC ROLE 9 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: SA 6 Apply knowledge of health advocacy, systems, and policy to identifying strategies for reducing health disparities and promoting individual and population health.													x	x
Comp. Code: SA 7 Demonstrate accountability to patients, society, and the profession by responding to societal expectations of physicians.													x	x
Comp. Code: SA 8 Demonstrate a commitment to patient safety and quality improvement.			x	x			x						x	x

THEMATIC ROLE 9 Competency Code & Enabling Competencies	History	EPA 2 Differential Diagnosis	EPA 3 Investigations	4 Management	Records	EPA 6 Oral Presentation	Evidence Based Medicine	8 Handover	9 Collaboration	Emergency Response	Informed Consent	Procedural	Health Systems	Community
Comp. Code: SA 9 Demonstrate commitment to equitable distribution of healthcare resources to under-privileged strata of the population of UAE by providing cost-effective and quality health care.													x	x
Comp. Code: SA 10 Demonstrate commitment to cater to the unique demands of the floating population and predominantly expatriate demographics of UAE.													x	x

Appendix 4: Main Guiding Principles in Each Competency

Medical expert

- Integration of biomedical, clinical and preventives and health promotion sciences
- Outcome-based education
- Learner-centered education
- Patient-centered curriculum
- Person-centered Physicianship
- Programmatic assessment
- Problem-based learning
- Team-based learning
- Community-based education
- Application of core clinical and biomedical sciences

Evidence-based practitioner and scholar

- Evidence-based practice
- Lifelong learning
- Collaborative learning
- Communities of practice
- Performance assessment
- Personal learning plan
- Reflection on practice
- Seeking and giving feedback
- Self-improvement
- Personal and professional development
- Research ethics
- Research methods
- Scholarly inquiry
- Scholarship
- Scientific principles

Patient and population-centered care provider

- Promotion of clinical decision-making
- Promotion of medical expertise and patient safety
- Application of patient-centered clinical assessment and management
- Prioritization of professional responsibilities.
- Procedural skills proficiency

Communicator

- Accurate and active listening
- Appropriate documentation
- Attention to the psychosocial aspects of illness
- Breaking bad news and disclosure of harmful patient safety incidents

- Effective oral and written information for patient care across different media
- Eliciting and synthesizing information for patient care
- Empathy and ethics in the physician–patient encounter
- Appropriate utilization of verbal and non-verbal communication
- Informed consent
- Patient-centered approach to communication
- Privacy, confidentiality, and rapport
- Respect for diversity and cultural sensitivity
- Shared decision-making and respect for patient as partner
- Promote therapeutic relationships with patients and their families
- Trust in the physician–patient relationship

Professional

- Commitment to patients
- Altruism
- Bioethical principles and theories
- Commitment to excellence in clinical practice
- Compassion and caring
- Confidentiality and its limits
- Disclosure of physician limitations that affect care
- Insight
- Integrity and honesty
- Moral and ethical behavior

System-based healthcare advocate

- Collaboration with community providers
- Communities of practice
- Conflict resolution, management, and prevention
- Effective consultation and referral
- Effective health care teams:
- Interprofessional (i.e. among health care professionals) health care
- Intraprofessional (i.e. among physician colleagues) health care
- Recognizing one's own roles and limits
- Respect for other physicians and members of the health care team
- Respecting and valuing diversity
- Health equity
- Health promotion
- Health protection
- Health system literacy
- Mobilizing resources as needed
- Principles of health policy and its implications

Collaborator, innovator & leader

- Maintain climate of mutual respect
- Communicate in responsive and responsible manner
- Participate in different team roles
- Demonstrate leadership skills
- Creative and innovative initiatives

Self and profession enhancer

- Utilization of portfolio
- Reflective practice
- Mentoring and academic counseling
- Peer review and evaluation
- Entrepreneurship and sustainability
- Cost-effectiveness
- Efficiency and effectiveness

Socially accountable

- Social determinants of health
- Contextualized health system
- Reduction of present and future patient and system errors
- Collaboration with different stakeholders outside and inside the health system
- Identify strategies to reduce health disparities
- Commitment to patient safety and quality improvement
- Commitment to expatriate demographic of UAE.

Appendix 5: Rationale for Development (Literature Review)

Summary of why it was necessary to develop this Framework:

- **Education improvement:** To improve the education of medical students, including curriculum design, assessment processes, etc.
- **Lack of competency framework:** To address the lack of a guiding competency framework in UAE medical schools.
- **Care improvement:** To clarify clinical profiles and improve the process of patient care across the country.
- **Improve understanding:** To improve understanding of the competencies required of graduating physicians.
- **Standardization:** To standardize the competency profiles of medical students and align them with physicians' competencies.
- **Healthcare changes:** To respond to changes in health care and health care provisions, and to prepare medical students for future predicted changes in practice.

Appendix 6: Needs Analysis-Regional and International

Local and Regional Needs	International Needs
• Professionalism is a social construct influenced by cultural and religious contexts. It is imperative that definitions of professionalism used in the education of physicians in training and in the assessment of practicing physicians be formulated locally and encompass specific competencies relevant to the local, social, and cultural context for medical practice. Abdel-Razig S, Ibrahim H, Alameri H, et al. Creating a Framework for Medical Professionalism: An Initial Consensus Statement From an Arab Nation. J Grad Med Educ. 2016 • UAE trainees have an overwhelmingly positive perception of international accreditation, with an emphasis on improving the quality of training provided. Ibrahim H, Abdel-Razig S, Nair SC. Medical students' perceptions of international accreditation. Int J Med Educ. 2015;6:121-124. Published 2015 Oct 11. doi:10.5116/ijme.5610.3116 • It is not just to increase the number of healthcare workers in the needed areas. The aim is to enhance their capacity to deliver the required services by ensuring that they have the skills, competencies, and experience necessary to expand the UAE health system. Marília Silva Paulo et. al. How do we strengthen the health workforce in a rapidly developing high-income country? A case study of Abu Dhabi's health system in the United Arab Emirates. Human Resources for Health volume 17, Article number: 9 (2019) • Education quality assurance, measuring program effectiveness, program renewal, and accreditation are addressed by some colleges. However, these practices should be embedded in the culture of all colleges and faculty need to be trained on how to do it. H. Hamdy. Medical Teacher. Undergraduate medical education in the Gulf Cooperation Council: A multi-countries study (Part 1). 2010 In conclusion, this study uncovered the diversity in curricula followed by medical schools in the Gulf Cooperation Council (GCC) countries, ranging from the traditional to the innovative hybrid PBL-based (Problem-Based Learning). It is for each medical school to determine its own educational goals, to design and follow the PBL-based curriculum to fulfill these goals, to analyze the context in which the school operates, and to identify the factors that constrain its.	• American Hospital Association https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3444207/pdf/i1949-8357-4-3-401.pdf • World Health organization https://www.euro.who.int/__data/assets/pdf_file/0010/288253/HWF-Competencies-Paper-160915-final.pdf Evidence shows that efforts focused on matching physician knowledge and skills to population needs address potential shortages and misdistribution of physicians, and increases productivity, job satisfaction, recruitment, and retention. Overall, it helps to improve quality of care. The process of matching physicians' competencies to patient needs involves more than just securing a physician that has theoretical knowledge and skills to work more efficiently and effectively. It rather involves ensuring that the physician can apply these knowledge and skills in practice.

Appendix 7: The Initial Draft of Competency Framework

1. Patient Care
2. Medical Knowledge
3. Interpersonal and Communication skills
4. Pracice-based Learning and Improvement
5. Service-based practice
6. Medical expert (the integrating role)
7. Communicator
8. Collaborator
9. Leader
10. Health advocate
11. Scholar
12. Medical expertise
13. Quality and safety
14. Teaching and learning
15. Cultural competence
16. Ethics and professional behavior
17. Judgement and decision making
18. Leadership, management, and teamwork
19. Health policy, systems and advocacy
20. Professional values and behaviors
21. Professional skills
22. Professional knowledge
23. Capabilties in health promotion and illess prevention
24. Capabilities in leadership and team working
25. Capabilities in patient safety and quality improvement
26. Capabilities in safeguarding vulnerable groups
27. Capabilities in education and training
28. Capabilities in research and scholarship
29. Clinical skills
30. Practical procedures
31. Patient investigation
32. Patient management
33. Health promotion and disease prevention
34. Medical informatics
35. Basic, social and clinical sciences and underlying principles
36. Attitudes, ethical understanding and legal responsibilities
37. Decision making skills and clinical reasoning and judgement
38. The role of the doctor within the health service
39. Personal development
40. Professional and ethical responsibilities
41. Legal responsibilities
42. Patient safety and quality improvement
43. Dealing with complexity and uncertainty
44. Safeguarding vulnerable patients
45. Leadership and team working
46. Professional and ethical responsibilities
47. Legal responsibilities
48. Patient safety and quality improvement
49. The health service and healthcare systems in the region
50. Applying biomedical scientific principles
51. Applying psychological principles
52. Applying social science principles
53. Clinical research and scholarship
54. Scientific approach to practice
55. Community-oriented practice
56. Psychomotor skills
57. Family and community issues in healthcare
58. Disease prevention and health promotion
59. Critical thinking, problem-solving and research
60. Self-directed life-long learning with skills in information and resource management
61. Professional values, attitudes, behavior and ethics
62. Scientific foundation of medicine
63. Population health and health systems
64. Management of information
65. Physicians must be altruistic
66. Physicians must be knowledgeable
67. Physicians must be skillful
68. Physicians must be dutiful
69. Carry out consultation with a patient
70. Assess clinical presentations, order investigations, make differential diagnoses, and negotiate a management plan
71. Provide immediate care of medical emergencies, including first aid and resuscitation
72. Prescribe drugs
73. Carry out practical procedures
74. Communicate effectively in a medical context
75. Apply ethical ad legal principles in medical practices
76. Assess psychological and social aspects of a patient's illness
77. Apply the principles, skills and knowledge of evidence-based medicine
78. Use information and information technology effectively in a medical context
79. Ability to apply scientific principles, methods, and knowledge to medical practice and research personal development
80. Promote health, engage with population health issues and work effectively in a healthcare system
81. The doctor as expert
82. The global doctor