Establishment of an Accelerated Doctor of Family Medicine Program at Unaizah College of Medicine, Qassim University, Kingdom of Saudi Arabia

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ABSTRACT: Primary health care is well known to be the cornerstone for the health of the society. Furthermore, efficient health care at the secondary and tertiary levels is entirely dependent on effective primary health care. The Kingdom of Saudi Arabia (KSA) is currently building up a rigorous primary health care system with a large number of well-equipped primary health care centers. However, there is an acute shortage of Saudi family physicians throughout the country; both in urban and rural areas. There is no evidence in the literature supporting the relatively long 7 years' traditional duration of medical programs in the KSA. Rather, several US and Canadian medical schools have established accelerated programs in Internal Medicine and Family Medicine with graduates comparable with those of the traditional curricula in terms of standardized tests, initial resident characteristics, and performance outcomes. In response to the challenges the KSA is facing in primary health care, Unaizah College of Medicine at Qassim University is proposing to establish an accelerated Doctor of Family Medicine Program that would run for total duration of 6 years. Herein, we describe a concise outline of this program.

KEYWORDS: family medicine, accelerated doctor of family medicine program (FMD), Saudi Arabia

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Background

Currently, there is a global focus on primary health care. A large number of medical schools throughout the world are reforming their curricula and developing learning environments that are tailored to a career in family medicine.[1–6]

The history of establishment of family medicine as specialty in the Kingdom of Saudi Arabia (KSA) dates back to 2008 when the Ministry of Health began to develop policies for improving health services through promoting the impact of family medicine and establishing a positive image for the role of primary health care centers. Furthermore, Schools of Medicine throughout the country have been adopting primary care as one of their core missions and therefore require their medical graduates to experience training in settings that deliver primary care, especially family medicine.

However, there is shortage of physicians, particularly in primary health care in the KSA. A recent report on the Saudi health workforce published by the Saudi Commission for Health Specialties shows that the total number of specialized and non-specialized Saudi physicians in 2017 was 25 249, giving a doctor-patient ratio of 1:1289, which is far beyond the target ratio.[7]

The lack of primary health care physician workforce in many areas of the KSA is very acute. The available national data suggest that compared with other specialties, a relatively small fraction of Saudi medical graduates choose primary health care careers.[7] The total number of specialized Saudi and non-Saudi physicians in the KSA in 2017 was 52 619; of these only 1935 were specialized as family physicians, whereas the remaining 50 684 were specialized in other specialties.[7] This gives a percentage of family physicians of only 3.6%, which is much less than the target percentage of 45% to 60% as is the case in Canada.[7] There is thus bad need in the KSA for developing a specific medical program that aims to produce medical graduates with special interest in Family Medicine.

Unaizah College of Medicine (UCM) at Qassim University is therefore proposing to establish an accelerated Doctor of Family Medicine Program (FMD) with a total duration of 6 years instead of the usual 7 years' medical program. Thus, students registered in the Accelerated FMD Program at UCM will have the opportunity to enter clinical practice 1 year earlier. In the KSA, family physicians are required to successfully complete a thorough residency program of 4 consecutive years in

the different disciplines of family medicine, supervised by the Saudi Commission for Health Specialties. The proposed FMD program is also designed in such a way that would allow graduates to complete a considerable requirement of the Family Medicine Residency Program during the Clerkship Phase and a period of 6 months extensive training as will be shown in the description below. This will be the first experience of developing an accelerated medical program not only in the KSA but also in the entire Gulf region.

Evidence suggests that long duration of medical programs does not result in better medical education or health care.[8–14] Furthermore, several medical schools in the United States and Canadian have had encouraging experience with developing accelerated medical programs with 3-year curricula. Experts in medical education now recommend the adoption of new medical educational model, which is based on the achievement of clearly defined competencies rather than the completion of a prescribed number of years of study.[8–14] The history of establishing accelerated family medicine programs goes back to the late 1980s and early 1990s, where approximately 25 US medical schools established accelerated programs in family medicine. Such programs allowed students to start their residency training programs while still finishing their fourth year of the medical program.[8–14] However, because of unresolved graduate medical education accreditation issues, these programs were eventually discontinued. Interestingly enough, several studies have shown that students in such accelerated programs perform similar to those in the traditional 4-year curricula in the following educational indices: standardized tests, initial resident characteristics, performance outcomes, practice choices, patient visit profiles, resident demographics, and graduate surveys.[8–14] A good number of allopathic and osteopathic medical schools in the United States are currently offering 3-year programs, which are competency based and focus on advancement of students.[8]

For more than 4 decades, the Cumming School of Medicine at the University of Calgary, in Canada, and the Michael G. DeGroote School of Medicine at McMaster University have been running accelerated competency-based medical curricula focusing on clinical experience and contextual learning for only 130 and 131 weeks, respectively.[8,15,16] When graduates of the medical schools of Calgary University were compared with those of University of Alberta, which runs a traditional 4-year curriculum, the results showed that the satisfaction levels of Calgary graduates' were comparable with or even higher than Alberta's graduates in terms of their training, practice patterns, specialty choices, and maintenance of competence in clinical practice. Furthermore, data from the College of Physicians and Surgeons of Alberta's Physician Achievement Review program demonstrated that Calgary medical graduates have had superior or equivalent performance in the various domains of competency to graduates of the conventional 4-year Canadian medical schools.[12,15]

A comparison of medical school graduates of McMaster University and the 4-year graduates of US and Canadian medical schools also showed that McMaster graduates have had comparable performance on standardized national examinations, ability to obtain preferred first-year residencies, practice during residency, and percentage pursuing primary care. McMaster graduates were also found to be more likely pursuing academic careers compared with graduates of 4-year medical schools. Furthermore, faculty members at McMaster were also found to be satisfied with the 3-year curriculum.[16,17]

These experiences provide a strong piece of evidence that the core components of medical school curricula can be delivered effectively and efficiently in shorter duration than the traditional 7-year duration to highly motivated and capable students in the right setting such as the one provided by UCM, being an innovative competency-based medical college.

Objectives of the Accelerated FMD Program at UCM

The following are the objectives of the proposed Accelerated FMD Program at UCM:

1. To increase the number of medical students choosing a career in family medicine, especially in underserved areas in the KSA;
2. To decrease the duration of medical education, especially to encourage students to pursue primary care;
3. To prepare primary care physicians more efficiently and with less cost;
4. To supply the Residency Program in Family Medicine in the Kingdom of Saudi Arabia with a dedicated group of medical graduates who are trained in a focused way and a shorter time in this essential medical field;
5. To provide medical education that would achieve medical professional competencies and contribute in applying national and international academic accreditation and quality assurance in all fields;
6. To train and graduate medical students on a high level of scientific knowledge and on the ability of self-education, analytical thinking, and problem-solving;
7. To disseminate health awareness and provide distinct health services to the community.

Overview of the Structure of the Accelerated FMD Program at UCM

With the proposed Accelerated FMD Program, UCM will be running 2 major medical programs. These are the regular MD Program and the Accelerated FMD Program. The 2 programs are preceded by a Foundational Preparatory Year managed by the Deanship of Educational Services at Qassim University. Both programs are composed of a Preclerkship Phase, which is also referred to as the Basic Medical Sciences Phase (BMS), followed by a Clerkship Phase. The BMS is common in both

Table 1. Outline of the MD and the accelerated FMD programs.

MD PROGRAM		PRECLERKSHIP PHASE; BMS PHASE			CLERKSHIP PHASE		INTERNSHIP FOR 1 YEAR
		YEAR 1 BMS1	YEAR 2 BMS2	YEAR 3 BMS3	YEAR 4 MD4	YEAR 5 MD5	
Accelerated FMD Program	Foundational Preparatory Year	Preclerkship Phase; BMS Phase			Clerkship Phase		0.5 year
		Year 1 BMS1	Year 2 BMS2	Year 3 BMS3	Year 4 FMD4	0.5 Year 5 FMD5	

The Foundational Preparatory Year and Years 1, 2, 3, and 4 are identical in both programs. The entire duration of the MD Program is 7 years and the FMD Program is 6 years.

programs and runs for 3 consecutive years; BMS1, BMS2, and BMS3. The Clerkship Phase of the MD Programs is composed of 2 years, whereas the Clerkship Phase in the FMD Program runs for 1.5 years only. The first year of the Clerkship Phase is identical in both programs, after which students in the regular MD Program undergo another 1 year of Clerkships, whereas students of the FMD Program go through only half year of Clerkships. The regular MD Program is followed by 1 year of structured rotating internship, whereas the Accelerated FMD Program is followed by only half year of extensive training focused on the main disciplines of Family Medicine. Hence, the entire duration of the regular MD Program is 7 years, whereas the Accelerated FMD Program allows for students interested in a career in Family Medicine the opportunity to complete their medical school coursework in an accelerated 6-year program of study. Furthermore, the proposed FMD program is designed in such a way that many of the Intended Learning Outcomes (ILOs) of Years I and II of the Family Medicine Residency Program (R1 and R2) run by the Saudi Commission for Health Specialties are entirely covered in the Family Medicine Clerkships and the half year extensive training that follows graduation.[18]

The Accelerated Curriculum builds on the strengths of the Team-Based Learning (TBL) Curriculum with clinical experiences and Community Medicine activities built into the Preclerkship Phase of the Curriculum and reinforced through 3 Family Medicine Clerkships during the Clerkship Phase of the Program. The outline of the 2 programs is shown in Table 1.

The Accelerated FMD Program was designed in consultation with the major stakeholders including the Ministry of Education, Ministry of Health, and the Saudi Commission for Health Specialties. The program was designed by a Curriculum Scientific Group including family medicine consultants and medical educationalists and supervised by well-known curriculum specialists. The proposal was reviewed and approved by a higher Scientific Committee.

Program Learning Outcomes of the Accelerated FMD Program at UCM

On completing the FMD program, the graduate should be able to demonstrate the SaudiMED competencies, which were approved by the Saudi Medical Deans Committee and the Education Evaluation Commission; EEC (formerly National Commission for Assessment and Academic Accreditation; NCAAA), as follows.[19]

Scientific approach to practice

1. Integrate basic, clinical, behavioral, and social sciences in medical practice;
2. Practice evidence-based health care.

Patient care

1. Demonstrate the essential clinical skills;
2. Use clinical reasoning, decision-making, and problem-solving skills in medical practice;
3. Manage patients with life-threatening medical conditions;
4. Manage patients with common medical problems;
5. Place patients' needs and safety at the center of the care process.

Community-oriented practice

1. Describe and use the health care system in Saudi Arabia;
2. Support health promotion and disease prevention.

Communication and collaboration

1. Effectively communicate with patients, their families, colleagues, and other health professionals;
2. Practice teamwork and interprofessional collaboration;
3. Use medical informatics in health care system effectively.

Professionalism

1. Adhere to professional attitudes and behaviors of physician;
2. Apply Islamic, legal, and ethical principles of professional practice;
3. Demonstrate the capacity for self-reflection and professional development.

Table 2. Structure of year 1 (BMS1) of the Preclerkship Phase of the MD and the accelerated FMD programs at UCM.

PRECLERKSHIP PHASE; BMS1					
ESSENTIAL FOUNDATIONS OF MEDICINE					
MOLECULES, GENES, CELLS AND TISSUES (MGCAT)		PRINCIPLES OF DISEASES AND THERAPEUTICS (PODT)			
Molecular and Genetic Foundations of Diseases	Principles of Body Structure and Function	Invaders and Defenders	Pathological Bases of Diseases	Principles of Pharmacology and Therapeutics	Principles of Population Health
University Requirement Course		University Requirement Course			
University Requirement Course					

Total number of credit hours in BMS1 is 36 credit hours.

Table 3. Structure of year 2 (BMS2) of the Preclerkship Phase of the MD and the accelerated FMD programs at UCM.

PRECLERKSHIP PHASE; BMS2					
HEALTH AND DISEASE OF BODY ORGAN SYSTEMS					
MUSCULOSKELETAL AND INTEGUMENTARY SYSTEMS	NUTRITION AND GASTROINTESTINAL SYSTEM	CARDIOVASCULAR SYSTEM	RESPIRATORY SYSTEM	RENAL SYSTEM AND ACID-BASE BALANCE	HEMATOPOIETIC SYSTEM
Introduction to Clinical Medicine I		Introduction to Clinical Medicine I Cont.			
University Requirement Course		University Requirement Course			

Total number of credit hours in BMS2 is 50 credit hours.

Table 4. Structure of year 3 (BMS3) of the Preclerkship Phase of the MD and the accelerated FMD programs at UCM.

PRECLERKSHIP PHASE; BMS3					
HEALTH AND DISEASE OF BODY ORGAN SYSTEMS					
NERVOUS SYSTEM	MIND, BEHAVIOR AND DEVELOPMENT	ENDOCRINE SYSTEM AND METABOLISM	REPRODUCTIVE SYSTEM	CLINICAL DECISION MAKING	PRINCIPLES OF PROPHETIC AND ALTERNATIVE MEDICINE
Introduction to Clinical Medicine II		Introduction to Clinical Medicine II Cont.			
Biostatistics and Basic Research Methodology		Biostatistics and Basic Research Methodology Cont.			
University Requirement Course					
Electives					

Total number of credit hours in BMS3 is 44 credit hours. Students are required to complete 1 credit hour of elective courses during Preclerkship Phase.

Research and scholarship

1. Demonstrate basic research skills;
2. Demonstrate Scholarly behaviors.

Curriculum Map and Requirements of the Accelerated FMD Program at UCM

Tables 2 to 6 show the Curriculum Map of the proposed Accelerated FMD Program at UCM. The total credit hours of the program are comparable with the credit hours of similar programs in the United States and Canada and also with the traditional nonaccelerated medical programs run by most of the medical colleges in the Kingdom of Saudi Arabia.[2–5,8,10–12,16,17] Thus, despite being an accelerated program, this does not compromise the total credit hours of the program. In fact, the total credit hours of the program are even higher than those of some of the usual medical programs in the Kingdom of Saudi Arabia. The essence of the proposed accelerated program is that it is a focused program with the credit hours delivered in a shortened period of time.

Table 5. Structure of year 4 (FMD4) of the Clerkship Phase of the accelerated FMD programs at UCM.

CLERKSHIP PHASE FMD4						
Basic Family Medicine	Internal Medicine	Psychiatry	Surgery	Orthopedics	Ear, Nose and Throat	Ophthalmology
	Clinical Dermatology and Introduction to Radiology	Forensic Medicine and Toxicology				

Total number of credit hours in FMD4 is 78 credit hours.

Table 6. Structure of the first half of year 5 (FMD5) of the Clerkship Phase of the accelerated FMD programs at UCM and the half year extensive training, which follows the Clerkship Phase.

CLERKSHIP PHASE FMD5				6 MONTHS EXTENSIVE TRAINING			
Pediatrics	Women's Health	Emergency Medicine	Sub-Internship in Family Medicine	12 weeks Family Medicine	4 weeks Internal Medicine	4 weeks Pediatrics	4 weeks OBGYN
Advanced Family Medicine							
Social and Ethical Issues in Medicine							

Total number of credit hours in FMD5 is 44 credit hours. No credit hours are allocated to the 6 months extensive, which follows the Clerkship Phase.

Preclerkship Phase (basic medical sciences phase; BMS phase)

This phase is composed of 3 years; BMS1, BMS2, and BMS3, and is devoted to delivering the basic biomedical sciences in an integrated system-based way, with early exposure to the relevant clinical experience and competencies.

The Preclerkship Phase is subdivided into 2 major themes. The first theme is *The Essential Foundations of Medicine*, which runs for year 1 (BMS1), and the second theme is *The Health and Disease of Body Organ Systems*, which runs for years 2 and 3 (BMS2 and BMS3).

The Essential Foundations of Medicine Theme itself is further subdivided into 2 subthemes: Molecules, Genes, Cells and Tissues (MGCaT) running for the first half of BMS1 and Principles of Diseases and Therapeutics (PODT) for the second half of BMS1.

The Health and Disease of Body Organ Systems Theme is divided into blocks covering the body-organ systems, and each block is divided into a number of weekly modules that revolve around central themes representing the common clinical presentations in the KSA.

Clerkship Phase

The Clerkship Phase runs for 1 and 0.5 years, namely, FMD4 for 2 semesters and FMD5 for 1 semester of year 5. In this phase, students undergo focused clinical training in both the basic and the advanced concepts and issues of Family Medicine through 3 main clerkships and courses in Family Medicine. Furthermore, students are also trained in the main clinical disciplines which are closely related to Family Medicine.

Extensive training

Following successful completion of the Clerkship Phase, students are awarded the degree of FMD by Qassim University. However, students will have to undergo a 6-month period of extensive training in Family Medicine and the relevant clinical specialties. This extensive training period is not credited. However, it is mandatory to fulfill the requirements of graduation.

ILOs of the 3 Main Family Medicine Clerkships/ Courses of the Accelerated FMD Program at UCM

A unique feature of the proposed Accelerated FMD Program at UCM is that it contains 3 major Family Medicine Clerkships/ Courses that cover the detailed basic and advanced topics in Family Medicine. Furthermore, the ILOs of a considerable part of Residency Year 1 (R1) and Residency Year (R2) of the Family Medicine Residency Program run and administered by the Saudi Commission for Health Specialties are also covered in these 3 clerkships.[18] The following is a concise description of the ILOs of these rotations.

Basic family medicine

This is a basic clerkship in the main concepts of Family Medicine during which students acquire the following SaudiMED competencies along the exact lines of the Saudi Board of Family Medicine:[18,19]

Patient care:

- Define family medicine/general practice;
- Identify the basic principles of family medicine;
- Demonstrate the ability to obtain a complete history, including past medical, psychosocial, family history, and complete review of systems;

- Perform a complete systematic physical examination;
- Demonstrate the ability to generate a problem list and appropriate assessment of the problem;
- Perform concise problem-focused presentation of the patient that reflects critical thinking in clinical decision making.

Communication and collaboration:

- Demonstrate effective verbal, nonverbal, and written communication with the patient and family regardless of their age, sex, social, cultural, religious, or ethnic backgrounds in various situations;
- Counsel and educate patients and families about acute illness, chronic illness, harmful personal behaviors/habits, and health maintenance strategies;

Community-oriented practice:

- Describe social, community, and economic factors that affect patient care;
- Describe factors affecting the health and illness patterns and the perception among populations; including lifestyle, genetic, demographical, environmental, occupational, social, economic, educational level, psychological, and cultural factors;

Research and scholarship:

- Demonstrate understanding of the concepts of evidence-based medicine;
- Appraise critically the available research evidence to address issues related to Family Medicine practice;

Professionalism:

- Identify the principles and elements of medical ethics;
- Identify the elements of professionalism;
- Demonstrate respect for patient and physician confidentiality.

Advanced family medicine

This is an advanced Family Medicine Course, with a core academic component, delivered as Longitudinal One-Day Activities during the entire semester of FMD5. On completion of this course, students will acquire the following SaudiMED Competencies along the same lines of the Saudi Board of Family Medicine:[18,19]

Patient care:

- Identify the role and scope of a family doctor;
- Appreciate the differentiating characteristics of Family Medicine and its roles in different health care settings;
- Identify family structure, lifecycles, and family dynamics;
- Discuss the role of the family in health and illness;
- Identify the basic principles/elements and tools of primary health care;
- Discuss recommendations for immunization and cancer screening;
- Understand the value of special clinics for chronic diseases;
- Know of consultation models;
- Identify the disease-illness model;
- Identify at-risk patients;
- Demonstrate knowledge of the most frequent clinical, laboratory, x-ray, ultrasound, and pathologic manifestations of common diseases encountered in Family Medicine;
- Consider the role of complementary and alternative medicine in managing patients;

Communication and collaboration:

- Identify the principles of communication skills;
- Understand the principles of the doctor-patient relationship;
- Learn of patients' and families' rights;
- Understand appropriate health maintenance recommendations by age, sex, and risk;
- Develop an awareness of psychosocial factors that have an impact on wellness and illness of both the patient and their family and incorporate into a management plan;
- Recognize the rationale and importance of teamwork;
- Identify the roles of various health care professionals involved in patient's care and collaborate with them;
- Appreciate the interaction between family medicine and the health care system (consultants, nursing, allied health professionals, social services, administrative staff, etc.);
- Demonstrate understanding of the significance of the Medical Informatics Systems.

Community-oriented practice:

- Describe community based interventions to modify or eliminate identified risks for disease or injury;
- Recognize the importance of biological and nonbiological (psychological, social, cultural, and environment factors) determinants that contribute to health of diverse populations;
- Explain the basic principles of prevention and control of communicable and noncommunicable diseases the community;
- Explain the impact of chronic diseases and disabilities on individuals, their families, and society;
- Be aware of the community resources for supporting the care of their patients;
- Identify global health issues and the role of international health organizations;
- Scholarship and research:
- Learn the principles of adult learning;
- Learn the skills of research methodology;
- Be able to use a learning portfolio;
- Prepare an effective presentation;
- Use knowledge to improve patient care;

Professionalism:

- Integrate self-development and learning needs into the training process;
- Assess and manage self and time;
- Manage personal stress;
- Identify own learning needs and learning styles;
- Use feedback effectively;
- Demonstrate understanding of the Thomas-Kilmann Conflict Mode Instrument;
- Integrate medical ethics and elements of professionalism in everyday work.

Subinternship in family medicine

This is an even more advanced clerkship in Family Medicine where the student develops the entire core Clinical Competencies of Family Medicine while learning the basic skills of diagnosis and management of a broad range of general medical conditions among pediatric and adult patients.[18]

On completion of this course, students will be able to acquire the following SaudiMED Competencies along the exact lines of the Saudi Board of Family Medicine:[18,19]

Patient care:

- Demonstrate a thorough understanding of relevant basic sciences, including path physiology, drug therapy, and the microbial basis of diseases of the key presenting problems and disease conditions encountered in family medicine;
- Perform a complete clinical patient assessment including history and relevant physical examinations;
- Formulate appropriate provisional diagnoses and alternative diagnoses of key presenting problems and underlying conditions;
- Order appropriate and selective investigations and interpret the findings in the context of patient problems;
- Able to attend to all problems presented by their patients and be able to cope with uncertainties;
- Differentiate between life-threatening conditions, serious but nonemergency situations, and benign conditions and initiate therapy appropriate to the situation;
- Describe, observe, or perform routine common technical procedures;
- Apply knowledge of common problems, wellness, and prevention within the framework of the family medicine approach to patient care (biopsychosocial model);
- Apply the family medicine approach to health care exemplified by the following key components: biopsychosocial aspects of care, comprehensive care, continuity of care, context of care, and coordination and integration of care;
- Establish and maintain the clinical knowledge, skills, and attitudes required to meet the needs of the practice and the patient population served;
- Provide comprehensive and continuing care throughout the life cycle, incorporating appropriate preventive, diagnostic, and therapeutic interventions;
- Apply consultation models;
- Assess consultation;
- Conduct effective consultations within the context of consultation models;
- Consciously enhance the patient-physician relationship, recognizing the characteristics of a therapeutic and caring relationship;
- Involve the patient in the informed decision making;
- Document patient findings in the medical records in a legible and timely manner;
- Evaluate the response to therapy and other management and adjust treatment plans accordingly.

Communication and collaboration:

- Demonstrate the ability to educate the patient about disease prevention;
- Demonstrate the ability to deal with patients in difficult circumstances;
- Demonstrate the ability to break bad news sensitively and effectively;
- Demonstrate the ability to communicate effectively with other members of the health care team;
- Facilitate coordination of patient care, including collaboration and consultation with other health professionals and caregivers;
- Demonstrate the ability to prevent and resolve interprofessional team conflicts;
- Use technology and information systems effectively, including storing and retrieving of information;
- Use the information retrieved from relevant sources appropriately and ethically in relation to patient care and health promotion.

Community-oriented practice:

- Describe national health care systems including its organization, policies, and procedures;
- Identify roles and services that are provided by societies and agencies and cooperate with them, where applicable;
- Advocate the patient's and community's health care needs;
- Provide cost-effective, competent, and efficient care based on the current evidence and guidelines;
- Describe the principles of epidemiology of common diseases within a defined population;
- Apply screening protocols based on guidelines and recommendations to identify risks for disease or injury and opportunities to promote wellness across the continuum of the life cycle;
- Apply the principles of prevention and control of communicable and noncommunicable diseases the community;
- Identify and plan prevention strategies for societal problems such as metabolic problems, obesity, diabetes, tobacco, road traffic accidents, alcohol, illicit drugs, violence, and abuse.

Research and scholarship:

- Demonstrate and apply the concepts of evidence-based health care in patient management;
- Integrate clinical knowledge and effective patient-centered care skills into patient care;
- Conduct a clinical audit;
- Demonstrate ethical and governance issues related to medical research;
- Apply the principles of research methodology including appropriate statistical techniques.

Professionalism:

- Demonstrating a compassionate interest, respect, and understanding of the patient as an individual, while maintaining a professional relationship;
- Apply professionalism and ethics in making decisions regarding individual patient care;
- Act professionally during the care of patients and their families and in interactions with their health care team and communities;
- Demonstrate awareness of the legal, ethical, and medical issues surrounding a patient's documentation;
- Obtaining informed consent from a patient for a proposed investigation or treatment, with appropriate supervision;
- Be accountable for one's own limitations and "self" evaluation;
- Place the patient's interests above one's own;
- Recognize and manage conflict of interest.

A variety of learning activities in a hybrid outpatient, inpatient, and community settings are adopted to ensure effective and efficient delivery and fulfillment of the ILOs of the Family Medicine clerkships, including conventional lectures, flipped lecture, TBL sessions, peer instruction sessions (PIs), case-discussion/study, clinical simulation, demonstration, ward round, bedside teaching, outpatient clinics in hospitals and primary health care centers, and field visits.

Similarly, a number of assessment tasks are used to evaluate students' performance throughout the clerkships using formative assessment activities and also by the end of each rotation through summative evaluation. These activities include multiple choice questions, extended-matching questions, modified assay questions, for Objective Structured Clinical Examination(OSCE), and for Direct Observation of Procedural Skills (DOPS). In addition, students have to submit their logbooks and portfolio, which should provide a detailed record of all activities and achievements obtained during the clerkships.

Challenges

Despite the efforts of the Ministries of Health and Education in promoting the concept of Family Medicine, there is still lack of clear understanding of the role of family physicians in the health care system in the KSA even among health care personnel. Furthermore, it seems likely that the Family Medicine specialty appears as a second tier or class specialty to medical graduates in the KSA. Perhaps, it is not well promoted or marketed on par with other specialties. Therefore, most of the medical graduates in the KSA prefer to work in hospitals with specialized care rather than in primary care health centers.

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Author Contributions

All authors participated in designing the program structure. The corresponding author wrote the initial draft of the manuscript and all authors revised the manuscript critically for important intellectual content and approved the final version of the article.

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