

Evolution of family medicine residency training program in Dubai Health Authority: A 24-year review, challenges, and outcomes

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ABSTRACT

Introduction: It is well known that family medicine (FM) is a cornerstone for developing a community-based health-care system, and training family physicians is critical for the society. In Middle East, only 5%–10% of physicians, nurses, and health technicians are citizens. This demands more efforts toward having national FM practitioners in the country. The development of FM residency training program through the past two decades in Dubai has played a crucial role in this aspect. **Methods:** The primary purpose of this study is to review the status of FM specialty training in the Emirates of Dubai throughout the past two decades. **Results:** The FM residency training program started since 1993 and had intake of 230 residents till 2017; out of which, 200 (87%) were female and 211 (92%) were the United Arab Emirates national. From 176 residents who are supposed to be graduated by 2017, 162 (92%) completed 4-year training, 132 (75%) has got the Arab Board certificate, and 116 (66%) qualified by the Membership of the Royal College of General Practitioners (MRCGP) international. **Conclusion:** The present study revealed that despite all challenges, the well-structured FM program enabled the graduates to reach high clinical, administrative, leadership, and academic positions such as consultant (40), chief executive officer (1), chief advisor for primary care (1), director (9), head of sections (9), head/deputy head of primary health center (55), head of academic affair center (1), chair of MRCGP international (1), program director of FM (4), MRCGP convener (6), MRCGP coordinator (6), and MRCGP examiner (42). However, the program is still lacking certification by an international accreditation body. This will help in reaching a better balance between education and clinical duties for all trainers and faculty; and will positively advocate support for an environment conducive to learning for residents as well as faculty members.

Keywords: Dubai, Dubai Health Authority, family medicine, residency training, United Arab Emirates

Introduction

Over the past two decades, the United Arab Emirates (UAE) has placed emphasis on improving the health care of the citizens. In the UAE, the government is the main provider of health care; however, health insurance is also provided by both governmental and private entities. The UAE has three main governmental bodies that regulate and provide the health services in the

country: the Ministry of Health which acts on the federal level and mainly on the northern emirates (Sharjah, Ajman, Umm Al Quwain, Ras Al Khaimah, and Fujairah); the Dubai Health Authority (DHA) that covers the Emirates of Dubai, and the Health Authority of Abu Dhabi which covers the capital of Abu Dhabi. These three entities are united on some regulations but each has their own regulatory authority and health facilities.

Family medicine (FM) has been recognized as an essential specialty to improve the quality of primary health care (PHC)

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physicians worldwide.^[1] It is well known that FM is a cornerstone for developing a community-based health-care system, and training family physicians is critical for the society.^[2,3] The major move toward a primary care approach to health is one of the features of Government Health Policy in the UAE. Introducing a district health system and developing a package of services to be delivered at this level is one strategy of improving access to quality health care for the population of the UAE.

One of the most important regional obstacles to develop efficient primary care systems is an insufficient number of family physicians and other primary care providers in this region. In Middle East, only 5%–10% of physicians, nurses, and health technicians are citizens and the remainder of the health-care workforce are foreigners.^[4] This demands more efforts toward having national FM practitioners in the country, in which the development of FM residency training program through the past two decades has played a crucial role.

The training of family physicians in the UAE consists of a 4-year postgraduate program that has many similarities to those in Canada, Australia, and Europe. The FM training program is under the umbrella of Dubai Residency Training Program (DRTP)^[5,6] which follows the regulations of the Arab Board of Medical Specializations that was established in 1978 with the goal of improving health systems and residency training in the Arab world by setting standards and includes members from 15 Arab countries. The Arab Board of Family Medicine was later established within the Arab Board of Medical Specializations and provides certification to eligible graduates. The primary purpose of this study is to review the status of FM specialty training in the UAE and specifically in the Emirates of Dubai throughout the past two decades.

Regulatory Framework

The goal of the DRTP is to improve Dubai and the UAE self-sufficiency in skilled specialist physicians who practice with high professionalism and proper ethical standards. The program is aiming to train specialists who are capable of practicing medicine independently to international standards expertly, humanely, and ethically and have achieved competency as a scholar, collaborator, communicator, manager, a health advocate, and a professional. Moreover, the program aims to train family physicians who can successfully compete for advanced fellowship training positions.

The Arab Board of Medical Specialization has recognized FM residency training program in DHA. The program is a 4-year duration, and on successful completion of the training, residents will be eligible to sit the Arab Board examination in FM. This will qualify the resident to practice as FM specialist in PHC. Although not mandatory, the residency program encourages getting the Membership of the Royal College of General Practitioners (MRCGP) – international certificate, after completion of the 3rd year of residency training.

PHC centers in DHA are among the first centers in the UAE getting accreditation for Arab Board Council of Medical Specialization on 1997. The last reaccreditation was on 2016 in which nine health centers got approval for training FM residents. The examinations consist of two parts: a written component (Part I) and a clinical skills examination (Part II). The examination is prepared by the Arab Council of Medical Specialization that is unified and taken at the same time in all Arab countries that have examination center.

The Family Medicine Curriculum

The training starts with 4 weeks “Introduction to Family Medicine”. The first 2½ years of the program are predominantly based in hospital rotations in different specialties. The training in the final 1½ years takes place in the PHC centers/clinics.

The training usually is supervised by family physicians qualified in postgraduate training known as mentors. The mentors contribute in planning, development, evaluation of the program, training processes, and evaluation of residents.

Research component of the program

To complete the residency training, each resident should complete a clinical audit and a research project. Residents perform the audit during the 1st year and once completed, present the results to the stakeholders. Research is combined to the training program and starts with a 3-day workshop on research methodology at the beginning of the 2nd year of residency. The process of research takes place on the 2nd and 3rd year of the training, and residents are required to submit thesis or publish their work in the 4th year of residency.

Clinical rotations

Core

Fundamental elements of training that is implemented in clinical rotations are pediatrics, internal medicine, accident and emergency medicine, surgery, obstetrics and gynecology, psychiatry, geriatrics, ophthalmology, otorhinolaryngology, dermatology, community medicine, and ambulatory FM.

Electives

The elective rotations would be chosen according to the needs and preference of the trainee, considering the recommendation given by program director.

On 2010, some more rotations have been added to the core clinical training by adding rotations in:

- a. Dubai Diabetes Center and the Dubai Fertility Center rotations: The UAE is well known to have high prevalence of diabetes,^[7] and training in the diabetes center enables the residents to clinical skills in different aspects such as diabetes education, nutrition, podiatry, retinopathy screening, and medical management. Training in the diabetes center differs from hospital training in that the patients are seen on an outpatient basis and do not

- cover acute cases. This is more similar to managing chronic disease patients who are commonly seen in PHC
- b. The fertility center training is a subspecialty core rotation that exposes the residents to infertility cases and their management in addition to the scope of services provided by the center, which all family physicians should be aware of
- c. Blood bank/thalassemia: Thalassaemia is well known to have high prevalence in the UAE,^[8] and managing thalassaemia patients in PHC is a mandate for FM physician. Hence, this rotation was added to core rotations to provide residents with more insights on clinical management of thalassaemic patients
- d. Urology and breast clinic: As part of surgery rotation
- e. Child and woman physiotherapy: It was added as elective rotation to increase the clinical management of musculoskeletal cases in general practice.

Academic Component

Curriculum content

Curriculum was driven from RCGP and all the thirty modules were distributed throughout the 4 years. In the 1st year, the basic principle of FM is covered, like being a GP, consultation skills, evidence-based medicine, research, ethics and professionalism, wellness promotion, and disease prevention. In the rest of the training years, the acute and chronic conditions in women’s and men’s health plus care of children, adolescents, and older adults are covered. In addition to modules of promoting equality and valuing diversity, the module of management and leadership are also covered.

Academic days

Throughout the residency program, trainees are released once a week to attend an organized scientific day program or to perform audits and research. Qualified family physicians also known as scientific day coordinator are responsible for the curriculum and act as facilitators of the academic sessions. The academic activities include small group work, case studies, and critical appraisal presentations by the residents. Active methods of teaching and learning are also used and include problem-based learning, case-based discussion, group discussions, and random case analysis.

Several educational activities, mini-clinical examination (mini-CEX), workshops, and courses are provided by the faculty during the training period. These include the followings: introductory course for newly joined 1st-year residents, preparatory courses for Arab Board examination, research workshop, audit workshop, basic life support, clinical skills simulation workshop, and critical appraisal workshop. Residents are also encouraged to participate in conferences such as World

Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians Conference, Family Medicine Conference, and American Academy of Family Medicine Conference.

Assessment

Several evaluation methods (formative and summative assessments) are implemented in the program such as end of rotation evaluation for hospital rotations, end of rotation evaluation for PHC rotations, academic day evaluations, and end of year evaluation per each residency year.

New evaluation forms were applied for both hospital and PHC rotations, which competencies have been applied after referring and benchmarking with international standards (The Royal College of Physicians and Surgeons of Canada, CanMEDS) of medical training. Tools for these assessments are as follow:

- a. The evaluation forms: Consistent of different competencies covering knowledge, skill, and attitude of the residents, which graded by the direct trainer or supervisor at end of the rotation (65% weight) along with bedside examination (35% weight). The evaluation is revised by the faculty and action will be taken in case of weak performance
- b. Logbook: The program has come up with logbook that has been released after benchmarking with international standards of training.^[9] Residents are required to keep and record all procedures required for successful completion of the course. This will have to be signed off by the supervisor. A trainee would not be allowed to sit the examinations if she/he has not successfully completed all the procedures required
- c. Summative evaluation: It includes mid-year academic examination, end of year academic examination, and end of year Saudi examination and that will affect residents upgrading to next year level if not passed.

Outcome of the Program

The FM residency training program started since 1993 and has intake of 232 residents till 2016 [Figures 1 and 2]; out of which, 200 (87%) were female and 211 (92%) were the UAE national. From 176 residents who are supposed to be graduated by 2017, 162 (92%) completed 4-year training, 132 (75%) has got the Arab Board certificate, and 116 (66%) qualified by MRCGP international. Higher academic achievers gained diabetes diploma and are assigned to cover diabetic mini-clinics in PHC which deliver more focus and comprehensive diabetic care with multidisciplinary team.

Figure 1: Family medicine residents annual recruitment during the past 24 years

| Residents annual recruitment | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Total |
| 2 | 4 | 2 | 5 | 7 | 3 | 3 | 7 | 6 | 5 | 9 | 9 | 18 | 40 | 6 | 7 | 9 | 11 | 15 | 16 | 13 | 15 | 13 | 7 | 232 |

Due to high demand for the UAE national FM physicians and because of high number of applicants, since 2006, the DRTP has restricted the entrance to the FM program to the UAE nationals only. Furthermore, the high number of females in the program can be explained by more females pursuing medicine in the UAE than male on the undergraduate level^[10] and also due to more socially flexible work schedule in FM compared to other specialties. Furthermore, the well-structured program enabled the graduates of FM to reach high administration, leadership, and academic positions [Table 1].

Challenges for the Future

One of the main challenges facing the FM training program in DHA is the availability of clinical trainers in the health centers. The current rules in DHA do not give the clinicians a protected time for training residents. The reason for this is the high service demand for physicians in PHC centers.

Another challenge is that FM training differs from other specialties: in takes place in different hospital sections and departments, this poses a great challenge for faculty while conducting a global end of year evaluation where some issues related to residents' attendance and participation during their postings are difficult to be assessed subjectively based on the hospital evaluation.

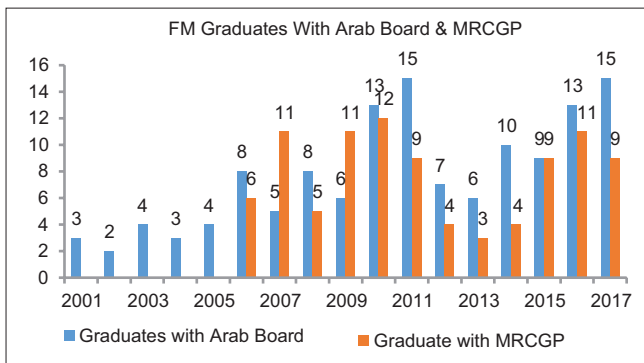


Figure 2: Family medicine graduates during the past 24 years

Table 1: Family medicine program graduates have been appointed to several clinical/administrative, leadership, and academic positions

| Clinical/administrative, leadership, and academic positions | Family medicine program graduates |
|---|-----------------------------------|
| Consultants | 40 |
| Chief executive officer | 1 |
| Chief advisor for primary care | 1 |
| Director | 9 |
| Head of primary care section | 9 |
| Head/deputy head of primary health center | 55 |
| Head of academic affair center | 1 |
| Chair of MRCGP international | 1 |
| Program director of family medicine | 4 |
| MRCGP module leads | 6 |
| MRCGP examiner | 42 |

MRCGP: Membership of the Royal College of General Practitioners, UK

Future Scopes

In accordance with the DHA plan to have all residency programs accredited by an international body, communication with the accredited bodies has taken place and a plan for accreditation is in process. The faculty is in the process of modifying the program to be certified by an international accreditation body but with local contents. It is hoped that after the certification, a better balance will be struck between education and clinical duties for all trainers and faculty as most international accreditation bodies advocate adequate support for an environment conducive to learning, for residents as well as faculty.

One of the goals of FM training program is to have affiliation with an academic institute within the UAE. This will definitely increase the quality of training and enhance the quality of the trainers who are actually an academic faculty.

Developing a rich bank of questions by including wide models of examinations such as written multiple choice questions, modified essay questions, objective structured clinical examination including simulated surgery, and oral question examination will help in further improving the residency training program.

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Conflicts of interest

There are no conflicts of interest.

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