Over the past 2 decades, most Middle Eastern countries have placed emphasis on improving the health care of their citizens. In most Middle Eastern countries, the government is the main provider of health care, and health insurance is viewed as a public responsibility. Family medicine, recognized as a specialty in its own right, is a cornerstone for developing a community-based health care system, and training family physicians is more important than ever. But, the practice of family medicine differs in each Middle Eastern country. This paper will review the status of family medicine in countries throughout the Middle East.

Demographic and Health Profile of the Middle East Population

The total population of the Middle East was estimated at 300 million in 2002, which represents 4.8% of the world’s population. In a large number of Middle Eastern countries, health and socioeconomic indicators reflect a satisfactory health status of the population. For example, the infant mortality rate decreased from 74.7 per 1,000 live births in the period 1980–1985 to 43.7 per 1,000 live births in the period 2000–2005, which is lower than the world average of 55.6 per 1,000 live births. While aging is not considered a priority issue in the Middle East, the number of people ages 65 and above has doubled from 5.7 million in 1980 to 10.4 million in 2000 and is expected to increase to 14 million by 2010 and 21.3 million by 2020. Population data from countries in the region are presented in Table 1.

Health Care Systems in the Middle East

The Middle East’s health care sector is expanding rapidly, and it has an effect on both the lives of people in the region and the economies of its countries, which range from very poor nations to wealthy oil-exporting countries. While the wealthier oil-exporting countries tend to have national health service systems, low- and middle-income countries have systems that mix public and private financing.

The region’s health care sector is witnessing major medical projects developed largely without any systematic planning. As a result, cost of care, especially hospital services, is escalating at the expense of more-essential services, such as primary care, emergency medical care, health promotion, environmental protection, and other public health programs.

While primary care has long been recognized as important to health care systems, implementation of
primary care systems does not necessarily follow. Some countries have developed significant primary systems while others have not.

In 1961, for example, the Turkish Ministry of Health (MOH) issued a regulation titled “Law on Socialization of Health Services,” which established primary care health centers as the basic units of health care and primary care health offices at the village level. Similarly, in the Gulf region and Libya, all countries have an extensive network of primary health clinics. These centers provide preventive and therapeutic health services such as maternal and child health care. And, the government of Bahrain has committed to provide all residents of the country with access to comprehensive health care, and Bahrain has been a pioneer in implementing a family medicine model in primary health clinics.

In other countries, while primary care services are deemed important, primary care systems are less well developed. In Lebanon, although there is a wide network of governmental clinics and nongovernmental organizations (NGOs) providing primary care services, there is a lack of coordination between services. Similarly, for many years, primary care in Jordan was delivered by a system of medical specialists and less well-trained general practitioners.

The most important regional barrier to development of primary care systems is an insufficient number of family physicians and other primary care providers. Physicians, nurses, and health technicians, who are citizens of Middle Eastern countries, account for only 5% to 10% of the health care workforce, The remainder of the health care workforce is comprised of foreigners who work in the Middle East. Depending on a country’s willingness and ability to recruit foreign health care workers, the numbers in manpower of health care providers can vary considerably. In Turkey, for example, there are 1.35 physicians per 1,000 inhabitants, while in Lebanon, the corresponding figure is 3.25 physicians per 1,000 persons.
Development of Family Medicine in Countries of the Middle East

This section of the article reviews the status of family medicine in individual Middle Eastern countries. Limits on availability of information necessitate varying levels of detail in the descriptions of programs in different countries.

Lebanon

Since its establishment in 1866, the American University of Beirut has played a leading role in Lebanon and in the Middle East region.7 The American University initiated a family medicine residency program in 1979. Since then the residency program has been graduating three to six family physicians per year. Family physicians in Lebanon have full admitting privileges in most hospitals, making them the only family physicians in the Middle East to work in hospitals. Except for faculty members of the residency program, Lebanese family physicians usually choose not to deliver babies.1,7

The residency training program curriculum is structured similarly to that of family medicine residencies in the United States. Residency training is supervised by faculty members, who are themselves family physicians. The Family Medicine Practice Center is adjacent to the American University of Beirut Medical Center, where family medicine residents provide in-hospital care for their patients.5 Fourth-year medical students at the American University rotate for a 1-month clerkship in the Department of Family Medicine.7

Because of its strong family medicine program, Lebanon is often perceived as a pioneer in family medicine in the Middle East. The Department of Family Medicine at American University has helped and participated in the launch of a number of family medicine programs in the region, including in Bahrain and Jordan.1,5

Bahrain

The Bahraini government developed a family medicine program to prepare physicians to be leaders in primary care in 1978.1 Because the Arabian Gulf University in Bahrain lacked the academic staff and a defined structure to start a residency program, the American University of Beirut and its family medicine program participated actively in the design, establishment, and maintenance of the Bahraini family practice residency.

The residency began in 1979 as an affiliate of the program in Lebanon, in which consultants in family medicine and other specialties from the American University of Beirut visit the Bahrain program every 2 months for 2 weeks. They provided clinical teaching in health centers as well as a series of seminars for all the residents.1

In 1996, the program was modified to 4 years’ training and started a new affiliation with the Irish College of General Practitioners and The Royal College of Surgeons in Ireland. It is now a community-based program in which training occurs mainly in the hospital in the first 3 years, with responsibilities in the primary care center increasing from one half day to a full day per week during those 3 years. The final fourth year is devoted exclusively to ambulatory primary care medicine; most of it is practiced in the health centers under the supervision of the family medicine residency program preceptors.

Training in community medicine, which includes public health, biostatistics, and epidemiology, is provided to all the residents. This is accomplished by giving condensed 2.5-month courses and a series of weekly sessions on issues related to community medicine.

Kuwait

The Ministry of Health in Kuwait started a family medicine program to train family physicians in 1983. To build local capability as quickly as possible, the Kuwaitis had to rely initially on outside help, in this case from the United Kingdom.1,9

In 1987, the university in Kuwait recognized family medicine as a formal postgraduate program at the medical school, and in 1991 provided an examination and degree certificate equivalent to that of the Membership of the Royal College of General Practitioners examination issued by the United Kingdom’s Royal College of General Practitioners. These were important factors leading to increasing choice of family medicine as a career by Kuwaiti medical school graduates.9,10

The number of medical school graduates entering family medicine then increased substantially, from 13 of 600 (2%) graduates in 1987 to 152 of 584 (26%) in 2002. Kuwaiti graduates accounted for 7.7% of the total number of foreign medical graduates practicing in other countries of the Middle East in 1987 and 77% in 2002.

The residency program in family medicine provides supervised learning opportunities and clinical experience in both hospital and family practice. All trainees are required to complete rotations in general medicine; pediatrics; obstetrics and gynecology; psychiatry; dermatology; ear, nose, and throat; general surgery; ophthalmology; orthopedics; and casualty and emergency medicine.10 In 2000, the program duration changed from 3 to 4 years, and in 2002 a system was developed for enhanced evaluations and assessment of trainees.

Qatar

Qatar established a family medicine program in 1994 in response to the need for upgrading primary care and to attract physicians to the country. In preparation for establishing the program, six local courses were offered by World Health Organization consultants. The program was established in a busy health center that
had 38,000 registered patients and an average of 11,000 to 12,000 patient visits per month.

United Arab Emirates (UAE)

The first residency program in family medicine in the UAE began at Al Ain University in 1994. The program benefited from the existence of an extensive network of primary health care centers. The problems faced, however, were absence of a family medicine model of care, restricted scope of practice, a physician-to-patient ratio that required emphasis on the numbers of patients seen rather than quality of care, and the absence of a medical auditing system or quality assurance program.

Despite the fact that the program is the oldest postgraduate training program in the UAE, it still suffers from the uncertainty of planning, and it continues to be understaffed. A new program is currently being planned at one of the primary care teaching centers in Abu Dhabi.

Libya

In Libya, the Department of Family and Community Medicine at Al Arab Medical University, Benghazi, has evolved the concept of family medicine at a model family medicine clinic. Based at the Al-Keesh polyclinic, the family medicine clinic is run by five teaching staff members of the department. It serves a population of 5,000 people living in houses provided by the Secretariat of Housing, Benghazi. The family clinic uses all facilities of the polyclinic, but the families report directly to the family clinic, where family records are maintained.

Jordan

In Jordan, there are currently four residency programs in family medicine. The first program was started by the Royal Medical Services in 1981 in response to the perceived need for comprehensive and cost-effective medical services. The first Board Examination in Family Medicine was in 1986. In 1989, the MOH started its first residency program in family medicine. And in 1995, Jordan's medical schools, Jordan University and the Jordan University of Science and Technology, both initiated family medicine training programs. In the same year, the Jordan Medical Council modified the length of the family medicine training program from 3 years to 4 years, standardizing the content of the training programs and establishing a “specialist” in family medicine.

Family medicine residents, on acceptance to the residency program, are appointed in their respective hospitals as residents in family medicine for 3 years. Residents in their fourth year are assigned to the post of trainee family physician. This post is held in an accredited Training Health Center.

Throughout training, residents are assigned one half-day release, to be spent in training in primary care centers. Community medicine courses run in a longitudinal manner from third-year residents to the end of rotation. So far, a total of 277 family physicians have been passed by the Jordanian board examination.

Turkey

Despite the early primary care activity in Turkey, the MOH did not accept family medicine as a medical specialty until 1984. The program began initially in hospitals affiliated with the Ministry. However, it was subsequently emphasized that the academic future of family medicine had to be assured and that hospital programs, rather than residencies, would not provide that assurance. As a result, in 1993 the country’s higher education council began establishing family medicine departments at universities. Currently, 23 out of the total 57 universities have family medicine departments.

In Turkey, specialty training in family medicine is still hospital based. Residency programs in university faculties and the MOH offer a 3-year curriculum in family medicine. The profile is one of clinical rotations or “multidisciplinary education” comprising experiences in psychiatry (4 months), obstetrics and gynecology (8 months), internal medicine (9 months), pediatrics (9 months), and surgery, chiefly based in the emergency department (6 months).

After completing these five rotations and preparing a dissertation, a family medicine resident is awarded the title of specialist in family medicine. So far, 1,300 family physicians have been trained, bringing an increase in the number and quality of family physicians. In four universities, family medicine departments are already involved in undergraduate education, with curricula consisting of topics such as introduction to family medicine, the basic principles of clinical medicine, medical interviews and history taking, review of physical examinations, and communication skills.

Iraq

Development of medical education in Iraq has been characterized by periodic revisions and controversy about the best curriculum models to be applied. Tikrit University/College of Medicine (TUCOM) was established in 1989 and was the only college in Iraq following the innovative community-based, community-oriented, problem-based learning program, implemented in response to the changing health priority needs of Iraq.

The general objectives of the college are to graduate a “Five-star Doctor”—that is, physicians who have the following competencies: being (1) a care provider by considering the patient as an integral part of his/her family and community, (2) a decision maker applying ethically and cost-effectively new technologies for enhancement of care provided, (3) a communicator by empowering individuals and groups toward enhancing
their health, (4) a community leader through initiation of health action on behalf of the community, and (5) a successful manager with the ability to work in harmony and cooperation with others inside and outside the health system.12

**Challenges and Future Trends**

**Practice**

Family medicine in the Middle East has not yet developed its full potential. There is a shortage of sufficiently qualified family physicians, and this in turn leads to overworked physicians, difficult access to care, and longer waiting times. Additionally there is a large number of patient visits overall, resulting in a heavy burden on the health care system.

The concept of evidence-based medicine is relatively new to the region, though there is gradual movement toward this approach. The best examples of evidence-based medicine in the Middle East are seen in Turkey, Saudi Arabia, Lebanon, and Jordan.6,11

The family medicine movement in the Middle East also needs to align itself with the suggested New Model of family medicine, which has the following characteristics: a patient-centered team approach; elimination of barriers to access; advanced information systems; an electronic health record; redesigned, more-functional offices; a focus on quality and outcomes; and enhanced practice finance.13 In most countries in the region, family physicians provide only outpatient care, and coordination between family physicians and subspecialists through advanced information systems or other methods is lacking.

**Postgraduate Training**

Currently, there are a limited number of family medicine residency programs, with about 20 programs graduating 150 residents each year, plus an additional 300 residents graduating annually in Turkey.1,13 The number of programs cannot grow until there is an adequate number of trainers and teachers. But, not all family physicians participate in teaching. Career development for physicians entering family medicine may follow several lines: practicing family physician, academic family physician, health planning, and administration. Few family physicians in the region work in hospitals after completing residency training, so they are unavailable to supervise residents, for whom the major site of training is in hospitals.

The emphasis on in-hospital training is another problem that needs to be addressed. During residency, residents spend extensive time working in inpatient departments and relatively few hours working in outpatient clinics. Yet, after graduation, few work in hospitals. Thus, primary health care-oriented residency programs have not been fully developed.6

Family medicine educators in the region believe that longitudinal training elements, interpersonal and behavioral skills, geriatric education, evidence-based medicine, and cultural competency should be incorporated into residency training. Programs should also support critical thinking, competency-based education, scholarship, practice-based learning, integration of knowledge, medical informatics, biopsychosocial integration, professionalism, and collaboration and interdisciplinary approaches to learning.13

Finally, it is of interest to note that there has been an increase in the number of female family medicine graduates. Health planners explain this by the fact that the schedule of family medicine practice may be more suited to the needs of females who have child care and other family commitments.14,15

**Undergraduate Training**

Most medical schools in the region follow a traditional curriculum. The educational approach at the universities is usually theory based and rarely practice based. Additionally, a few countries have introduced primary health care in the curriculum. There are a number of medical schools that were pioneers in implementing some fundamental changes, including those in Lebanon, Turkey, Bahrain, Jordan, and Iraq. Nonetheless, faculty at schools in those countries have encountered resistance from those responsible for classical medical education programs, in which the needs of medical science take precedence over those of society or in which individuals or patients are considered “material” for learning and physicians merely curative or operative.

**Continuing Professional Development and Research**

The discipline of family medicine needs to develop a comprehensive, lifelong approach to learning. The enforcement of certification/recertification, continuing professional development programs, and quality improvement strategies will favorably influence the specialty of family medicine.

Although there is need for the discipline of family medicine to contribute to medical and health system knowledge, there is limited support for primary care research. Its need and the ability of family physicians to conduct it are not generally appreciated by others.16 This is the one of the reasons for the establishment of the Middle East Primary Care Research Network (MEPCRN). MEPCRN and others involved in primary care research plan to develop a cadre of professional researchers and thereby address the lack of critical mass of researchers at most institutions by encouraging collaboration and sharing of expertise and resources.17,20

The region will also benefit from the establishment of a regional resource center for family medicine and primary care. Such a center could develop strategies to
promote family and other primary care physicians as health policy and research leaders in their communities, in government, and in other influential positions. The center could act as a vehicle for further development of the discipline and for pooling of resources as well as a funding body for research.

In support of professional development, a number of regional professional family medicine societies have been established, including those in Lebanon, the UAE, Saudi Arabia, Turkey, Jordan, Oman, Egypt, and Qatar. These societies were instrumental in the development of the discipline. Most of these organizations hold annual national scientific congresses or have participated in international, regional, and local conferences. There is still a great need for a unified regional association of family physicians, in addition to more collaboration with other international associations.

Finally, professional development for family physicians in the United States includes the option for additional training and acquisition of certificates of added qualification in fields like geriatrics and sports medicine. In most Middle Eastern medical schools, there is a notable lack of enthusiasm by departments of family medicine for developing and sanctioning such specialty practice.

Conclusions

The challenges facing Middle Eastern family physicians in the years to come are many, and a collective, robust action plan will be required to meet them. Family physicians must learn to adapt, to be capable lifelong learners, to use innovations and advances to further patient well-being, and to interact skillfully with every sector of the health care community.

Nonetheless, despite a relatively late arrival into a medical system traditionally dominated by subspecialists, the development of family medicine is beginning to lead to a restructuring of the role of primary care. Regionally, the implementation of family medicine services is at the center of health policy debates, but there are still many barriers to the development of family medicine.

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