Review

Twenty years of family medicine education in Saudi Arabia

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Introduction

Saudi Arabia is on the Arabian Peninsula, has an area of nearly 2 million square kilometres and, as of 1993, a population of 16.9 million [*1*]. The fourth and fifth Five Year Development Plans (1985–1990) have put great emphasis on primary health care (PHC) development within the country [*2*].

In response to the need for comprehensive, cost-effective and cost–benefit services, the health care system of Saudi Arabia has witnessed major changes since the early 1980s. This followed governmental commitment to the Alma Ata declaration in 1980. Currently, nearly 1800 governmental PHC centres are distributed evenly throughout the country, 1707 of which belong to the Ministry of Health (MOH) [*3*]. The remainder are run by various health care providers, including universities, the military, the National Guard and the Security Forces. Entry into the health care system is through PHC centres. More than 180 secondary and tertiary care hospitals serve as referral units and each group of PHC centres is attached to a hospital.

The adoption of PHC policy mandated the development and training of health manpower in the field of PHC and family medicine. This paper documents 20 years of family medicine and PHC training programmes and education for doctors in Saudi Arabia with particular reference to the development of staff, undergraduate curriculum, and postgraduate training programmes in PHC and family medicine. The development of continuing medical education programmes and the function of PHC physicians in the MOH are also outlined.

Historical background and programme development

Undergraduate training: history and staff

There are seven universities in Saudi Arabia and five colleges of medicine. Table 1 shows the date of establishment of each of the colleges of medicine and the family medicine or PHC programmes available at each.

In 1980, the College of Medicine, King Faisal University (KFU), became the first to combine family medicine with community medicine to form a single department of family and community medicine. King Saud University (KSU) followed in 1982. This concept was later adopted by the col-

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Table 1 **Establishment of family medicine/PHC sections in colleges of medicine**

University	Year of establishment	Province	Year family medicine/PHC established
King Faisal	1975	Eastern	1980
King Saud	1968	Central	1982
King Abdul Aziz	1975	Western	1985
King Saud–Abha branch	1981	Southern	1986

PHC = primary health care

leges at King Abdul Aziz University (KAU) and at the KSU-Abha branch.

The combination of these programmes succeeded on three fronts. It brought community medicine expertise to family physicians. It accelerated the development of relevant and need-oriented curricula at both undergraduate and postgraduate levels. Finally, it created a staff of family physicians and community health specialists from different countries and educational backgrounds.

At KFU, the family physicians came primarily from New Zealand, Australia and the United Kingdom, whereas at KSU the physicians were primarily from the United States and United Kingdom. In the fields of community medicine, statistics, epidemiology, maternal and child health (MCH), and environmental and occupational health, the staff came primarily from the Sudan, Egypt and India.

Training in PHC and family medicine

The first four medical colleges have well-structured undergraduate curricula in PHC and family medicine. They all share the concept of integration and coordination between family and community medicine. Table 2 shows the basic structure of the undergraduate curriculum in family and community medicine available at the four medical colleges in Saudi Arabia. Biostatistics and epidemiology classes are theoretical. During the fourth year, students are introduced to the concepts and elements of PHC. Fieldwork provides experience in the logistics of running PHC activities and supervising small-scale, community-based and PHC-oriented research.

Table 2 **Undergraduate curriculum in family and community medicine**

Course	Credit hours (units)	Year available
Biostatistics and epidemiology	2–4	2nd or 3rd
PHC principles and elements[a]	3–4	4th
Fieldwork (applied PHC)	2–4 weeks	4th or 5th
Family medicine clerkship	4 weeks	5th, 6th or internship

[a]Except King Saud University
PHC = primary health care

In Saudi Arabia, the two colleges of medicine at KFU and KSU introduced family medicine clerkships in 1980 and 1985 respectively. A balanced approach to curriculum planning was followed. The objectives of the clerkship were typical [*4*] and

emphasized the process of consultation, context of health care, organization of care, professional and ethical values and attributes and professional development. KAU and KSU–Abha followed suit later. The duration of the courses varies from 4 to 6 credit hours in either the fifth (KAU), sixth (KSU) or internship (KFU) year. KFU initially offered the course during the sixth year to help students as they chose their future careers. Now, after 10 years, we are debating whether to retain the course during the internship year or return it to the sixth year.

Clerkship training takes place at the KFU postgraduate family medicine training centre. It stresses attitude and skill development and the instruction actively involves the students. It includes case discussions, role-play and supervised clinical sessions. Evaluation is through continuous assessment, logbooks and tests.

Postgraduate training

Postgraduate training in family medicine is essential for the staffing and development of PHC-led health care. In Saudi Arabia, the commitment of the MOH to the Alma Ata declaration coincided with the development of postgraduate training in family medicine. In 1981, KFU invited international and regional experts in family and community medicine to develop a postgraduate training programme relevant to family physicians in Saudi Arabia. This was followed in 1982 by a national workshop at KFU involving local participants from medical colleges as well as the MOH and other government agencies providing health care. Their recommendations strongly supported the KFU initiative in the family and community medicine fellowship training programme [*5*].

Experts included family physicians, community medicine physicians and physicians from other clinical departments and their input resulted in a unique programme. Its main features were relevance, comprehensiveness, community orientation, scientific soundness, use of active learning methods and a balance between theory and practice, which included a need-oriented dissertation. The main objectives of the programme are to produce specialists who are competent clinicians able to deal with common conditions, who are self-learners, educators, leaders and effective communicators and who are capable of designing and carrying out appropriate research [*6*].

Table 3 shows the content and duration of the courses of KFU and other family medicine fellowships and board training programmes [*7–9*]. These programmes include the Arab Board of Family Medicine, which is a degree granted under the Arab Board of Medical Specialties, the KSU Fellowship and the Saudi Board. They began in 1988, 1992 and 1995 respectively. Community medicine and related subjects comprise 25% of the programme in the KFU Fellowship compared with nearly 10% in the Arab Board and 15% in the KSU Fellowship and the Saudi Board. To a great extent they all share the same previously stated objectives and emphases, although the Saudi Board is expected to lead among this field eventually.

Table 4 shows the annual enrolment and number of registered candidates and graduates from the various programmes [*10*]. Residents can enrol in one or more of these programmes simultaneously, but remain under the supervision of the Saudi Council for Health Specialties through its scientific board of family and community medicine. Currently, there are seven family medicine training centres for the Arab Boards in Saudi Arabia and five are accredited by the Saudi Council for Health Specialties as training

Table 3 **Inception, content and duration of family medicine fellowships and boards**

Subject	Duration of programme (months)			
	KFU Fellowship (1982[a])	Arab Board of Family Medicine (1988[a])	KSU Fellowship (1992[a])	Saudi Board in Family Medicine (1995[a])
Introduction to family medicine	1	1	1	1
Medicine	5	5	6	6
Paediatrics	4	4	4	4
Obstetrics/gynaecology	3	3	4	3
Surgery	2	2	4	3
Family medicine centre attachment	8	7	8	12
Emergency medicine	–	2	2	2
Psychiatry	2	1.5	3	3
Dermatology	1	1	1	1
Ophthalmology	1	1	1	1
Ear, nose and throat	1	1	1	1
Radiology and laboratory medicine	–	1	2	–
Attachment to I, SH, CCD unit[b]	2	–	–	–
Community medicine course[c]	5	2	3	3
Research project	6	–	3	3
Elective	4	1.5	1	2
Total duration (months)	45	33	44	45

[a]*The year of inception*
[b]*I = industry, SH = school health and CCD = control of communicable diseases*
[c]*Statistics, epidemiology, research methods, occupational and environmental health, maternal and child health, ethics and law, health management and education methods*
KFU = King Faisal University *KSU = King Saud University*

Table 4 **Annual enrolment and number of registered candidates and graduates**

Group	KFU Fellowship	Arab Board	KSU Fellowship	Saudi Board
Annual enrolment	10	30	4–6	40
Registered candidates	98	205	20	122
Graduates	64	80	10	None

Residents can register in different programmes simultaneously and acquire more than one degree.
KFU = King Faisal University *KSU = King Saud University*

sites for the Saudi Board in Family Medicine.

The need for two levels of PHC and family medicine specialists was recognized early. In 1983, KSU started its 2-year masters and diploma programmes in PHC and by 1995 KFU offered a diploma in family and community medicine (Table 5). There are two other vocational training programmes. One is the 12-month vocational training programme in PHC developed by the MOH in conjunction with the Royal College of General Practitioners in the United Kingdom (RCGP-UK) and locally recognized by KSU. The other is the 3-year programme developed at the military hospital in Riyadh in conjunction with RCGP-UK in which candidates become eligible to sit for membership of the RCGP.

Table 5 **Inception, content and duration of family medicine diploma programmes**

Subject	Duration (months) KSU Diploma (1983[a])	KFU Diploma (1995[a])
Surgery	4	3
Emergency medicine	1	–
Psychiatry	2	–
Community medicine	–	3
Medicine	6	3
Paediatrics	4	3
Obstetrics/gynaecology	–	3
Elective	–	3[b]
Introduction to family medicine	1	2
Family medicine health care	3	3
Total duration	24	23

[a]*The year of inception*
[b]*Resident can select one or more of the following: psychiatry, ear, nose and throat, ophthalmology or dermatology.*
KSU = King Saud University
KFU = King Faisal University

Evaluations of trainees in the above fellowships and board programmes include continuous assessment through logbooks, proctors' reports and mock examinations. The Arab Board has only a final exit examination at the end of the 3 years of training, while all the others have end-of-course examinations. There are two major examinations, midway and final, and each has a written component (multiple choice questions and patient management problems with or without structured essays). The first major in KFU and KSU fellowships additionally has a structured oral evaluation and clinical examination. The final examination in each programme has written, oral and clinical components. Examiners from the United States, Europe and other parts of the world have participated in the examinations and their written comments have been useful in our continuous programme revision.

Continuing medical education programmes for PHC physicians

There are more than 4000 physicians working at PHC centres in KSA [*4*]. Because becoming a certified family physician is a long process, it is essential to establish continuing medical education programmes (CMEPs) relevant to their professional needs. At the MOH level, established CMEPs have taken the form of structured, well-scheduled programmes with specific objectives and target dates as well as sporadic CME activities. Four main structured CMEPs have been developed and implemented by the MOH jointly with university experts and in particular with staff from the departments of family and community medicine at KFU and KSU. These programmes are 3-day reorientation courses dealing with principles and elements of

PHC, MCH, quality management and bronchial asthma. The MOH has also produced and distributed freely several reference manuals and protocols on PHC subjects.

The Saudi Society of Family and Community Medicine (SSFCM) was established in 1989 under the umbrella of KFU. Over the past 8 years, 12 branches have been established throughout the country. CME is a major objective of the society. The society holds a general conference once every 2 years and an annual symposium which addresses a major issue related to the training or practice of family medicine. It also issues the *Journal of family medicine*, which is a peer-reviewed scientific journal distributed to all members, and a quarterly newsletter. Regional clubs have been formed, members meet regularly and host their own CME activities. At the university level, all CMEPs and structured courses are made accessible to PHC physicians.

Unfortunately, CME is still not compulsory and there is no established system of continuity, evaluation and accreditation. Emphasis is still on knowledge but attitudes and skills need improvement. Traditional methods still prevail and activities primarily take place in the city. Ensuring accessibility, feasibility and relevance to everyone is essential. A good example of a CMEP designed for PHC doctors by colleagues of other specialties is the one offered by the Saudi Eye Association. Similar packages need to be developed in other fields.

Discussion

This paper has attempted to document the evolution, development and contents of family medicine, CME and training programmes in Saudi Arabia. Several factors have contributed to the initial success of such programmes. These factors include the early establishment of joint family and community medicine departments, which unified resources and ensured comprehensive and relevant undergraduate and postgraduate programmes. The mix of expertise and cultures of the staff has also enriched these programmes. The involvement of programme residents and specialists from other related departments has been fundamental to the success.

To expand the programmes, emphasis should be placed on improving training sites and using multiple qualitative techniques to assess them, including participant observation, use of focus groups, long interviews and analyses of key texts [*11*]. The professional development of trainers and the establishment of clear and standardized assessment criteria are essential to enable trainers to assess students' goals, provide timely and honest evaluations and offer students critical feedback [*12*]. Enhancing procedural training is essential. This will require agreement on a core skills curriculum and dedicated efforts to ensure implementation [*13–16*]. Clinical teachers of family medicine need to be educated to serve as role models who embody values, have exemplary attitudes and are champions of standards. They should also be motivators, disseminators of knowledge and skills, assessors and researchers [*17*].

The Scientific Council of the Saudi Board of Family and Community Medicine (SCSBFCM) has already started work in this direction but more is still required. A relevant core curriculum of CMEP must be developed through a cooperative effort between the SSFCM and SCSBFCM. Universities whose staff are well represented in both can play a major role in this. Such a curriculum should specify what is to be offered, to whom, why, when, where and how. The World Organization of National Colleges and Acadamies of Family Doctors

(WONCA) document on distance education could serve as a guideline [*18*].

Motivating PHC doctors to undertake CME requires legislation and a system for accreditation. The Saudi Council for Health Specialties and the SSFCM are expected to undertake this task with support from the MOH, universities and other healthcare agencies. This is expected to raise the standards of practice and hence, the quality of care.

Developing PHC through education is a recognized and effective approach [*19,20*]. Basic qualification through the acquisition of a specified number of distance learning credit hours is worth consideration in order to ensure fundamental reorientation and attitude and skills development for PHC physicians in a shorter period of time. The World Health Organization (WHO) and WONCA jointly recommend that continuing medical education be centred on the performance of doctors in meeting people's needs and should include where necessary a commitment to change existing practice in response to the needs of individuals and communities. Each discipline, including family medicine, should accept responsibility for planning and delivering its own CMEP [*21*]. Stronger links with related associations and societies like WONCA and WHO are essential at both central and regional levels. These can contribute to and enrich our experience through their views, publications and active participation in educational activities.

At the undergraduate level, there is a need for frequent evaluation of the family medicine curricula and teaching methods. Family and community medicine departments at the various colleges might consider agreeing upon a common relevant core of family medicine, knowledge, attitudes and skills for their students. This has been found to be a useful process [*22*].

In conclusion, the process has begun, but there is still a long way to go. Success will require sincere effort and commitment from all concerned, however challenging but promising the process seems.

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