FAMILY MEDICINE POSTGRADUATE TRAINING IN PAKISTAN

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ABSTRACT

There is no organized system of postgraduate training for family medicine or general practice in Pakistan. This paper describes the status of primary health care delivery in Pakistan and the growth of family medicine throughout the world. It stresses the need for organized postgraduate training relevant to the needs of primary health care in Pakistan and describes efforts currently under-way in this regard at the Aga Khan University Medical Centre (AKUMC) in collaboration with the College of Physicians and Surgeons of Pakistan (JPMA 42: 69, 1992).

DEFINITION OF KEY TERMS

Primary Health Care
Essential health care made universally accessible to individuals and families in the community by means acceptable to them through their full participation and at an affordable cost. Primary health care includes community and primary medical care as essential components.

Primary Medical Care
The field of medicine, in which patients first enter the medical system, is of personal health care. It encompasses several medical sub-specialities including family medicine, internal medicine, pediatrics, obstetrics and gynecology. It includes provision of care for acute and chronic medical conditions as well as health promotion, disease prevention and rehabilitation:

Family Medicine
The primary care medical speciality is concerned with the total health care of the individual and family. Family practice, the clinical component of family medicine, provides continuing and comprehensive care from biopsychosocial perspective. The scope is not limited by age, sex, organ, system or disease entity. Family physicians personally provide care for the majority of conditions encountered in the ambulatory setting and select appropriate consultants or other health professionals integrating all necessary health care services. In some cases, family physicians are active in hospital practice and, if not, will assume responsibility for their patients' pre and post hospital care.

INTRODUCTION

Since the creation of Pakistan the majority of its citizens have had limited access to effective and affordable basic heahh care services. Economic under-development, political instability and low levels of literacy have hinderd progress in the equitable distribution of health care services particularly to poor and rural inhabitants. Thus while 70% of the population is living in rural areas, 85% of the physicians and 95% of hospital beds are situated in urban areas of the country[1]. The Indo-Pak subcontinent has a long history of traditional healers including pirs, hakeems and village birth attendants or "dais" These traditional healers have provided access to health care when other options might not be available and vary in their effectiveness in treating psychosocial and biomedical problems. "Quacks", as labelled by the Pakistan Medical Association, have no formal medical qualifications but

portray themselves as bonafide practitioners, are estimated to provide nearly half of the general medical care in Pakistan[2]. This low quality of health care coupled with limited access to clean water, sewage facilities and a poor public health infrastructure has resulted in Pakistan's continued high burden of infectious diseases, maternal and child mortality and needless suffering. In partial response to the above problems, Pakistan and its medical profession have emphasized the production of more doctors. The number of medical graduates has risen dramatically from only 1300 doctors per year in 1977 to over 3800 per year in 1988[3]. Unfortunately, despite this increase in the number of doctors there has been relatively limited improvement in the health status of the population. This is reflected by the fact that Pakistan ranks 34th out of the 131 nations of the world with the highest infant mortality rate, which dropped from 160 per thousand in 1960 to 106 in 1989[4]. Additionally, infectious and parasitic diseases continue to account for more than two thirds of all deaths in the population[5]. Pakistan is experiencing transition in disease patterns secondary to demographic and socioeconomic shifts which have important implications for the provision of adequate primary health care. The high fertility rate (eight children per women during her child bearingyears) and improved child survival has led to one of the highest rates of population growth in the world (nearly 3%[5]) There is also substantial growth in numbers of the elderly. By 2020, the segment of the population over age 65 will increase by 10 million. A rapid trend towards urbanization is occurring. It is projected that by the year 2000, 50% of the population will be living in urban areas as opposed to the current 30%. Initially, the diseases of under development such as malnutrition and infectious diseases predominated.

Now, in addition to the diseases of underdevelopment, the diseases of development such as hypertension, diabetes, coronary vascular diseases, cancer and drug addiction are emerging as important contributors to morbidity and mortality. The reasons for slow improvement in health are complex and inseparable from the problems of under-development in Pakistan. However, an important factor which has not been systematically addressed by the profession is the lack of orientation of medical education at the undergraduate and postgraduate levels to meet the needs of primary health care. Though the Pakistan Medical and Dental Council states that the objective of the M.B.B.S. curriculum is to prepare a general purpose community oriented doctor, only 10 hours of the overall curriculum time is officially assigned to the teaching of general practice[6]. While the teaching of primary care, family medicine, preventive and community medicine is limited in most medical schools, provision of this care has become more complex. While medical students receive limited training at the undergraduate level in the delivery of primary health care, even less is available at the postgraduate level. While over 50,000 doctors graduated from the 17 medical schools in Pakistan from the period of 1979 to 1991, less than 3000 acquired postgraduate qualifications from the College of Physicians and. Surgeons of Pakistan (unpublished data). In Pakistan to date, there has been no organized system of postgraduate training or certification that would prepare a physician to address the basic primary health care needs of communities in both urban and rural areas.

Family Medicine

Family medicine is one of the primary medical care specialities. Like internal medicine and pediatrics, it is a speciality of first contact with patients and serves as an entry point for patients into the health care system. Family medicine, however, is not restricted by age or sex and is devoted to providing comprehensive preventive, promotive and curative care with emphasis on the family unit including the community and social environment. It is a speciality of breadth rather than depth and requires familiarity with all medical and surgical sub specialities especially internal medicine, pediatrics and obstetrics and gynaecology. It also includes familiarity with community, preventive and behavioural medicine. Family physicians are trained to care for the majority of common health problems, recognize their limitations and make referral to specialists or for hospitalization when indicated. A family physician personally takes care of most of an individual's health needs or selects appropriate consultants, coordinating all necessary health services. In some areas, family phgsicians maintain

active hospital and obstetric practices, while in other areas their practice is limited to outpatient care.
The expansion of family medicine has been an international movement over the last two decades. After World War II, there was a global trend towards medical specialization linked to rapid advances in medical science and technology. Associated with this increase in medical sub specialization was a decrease in the availability of high quality primary medical care, particularly for the rural and urban poor[7]. Responding to this trend, in its guidelines for training of health professionals, the World Health Organization has stressed the need for more family physicians and specific postgraduate training programmes to adequately prepare family physicians for the needs unique to their communities[8]. The shortage of adequately trained general physicians has been approached in different manners in various countries. Some have developed specific postgraduate residency training programmes from two to four years in duration and speciality board examinations and certifications. Others have emphasized generalist training in the undergraduate curriculum and some have not addressed this issue at all. In Canada, residency training in family medicine lasts two years after graduation from medical school and over half of all Canadian doctors are family physicians. Additional training in surgery or anesthesia is available for doctors planning to practice in rural areas[9]. In the USA, a long process of work for recognition of the speciality resulted in establishment of the American Academy of Family Physicians, a three years residency training programme and requirements for continued recertification throughout the family physician's career. Fifteen percent of doctors in the USA are family physicians and there is greater demand for family physicians than any other medical specialist[10]. In Britain, 40% of doctors are general practitioners (the British equivalent of family physicians) who complete a two to three years postgraduate training programme. Training programmes in Central and South America and in the East have been implemented and are underway in Egypt, Lebanon, India, Korea and Japan to name a few[7].

Training in Family Medicine at the Aga Khan University Medical Centre.

Recognizing the need for well trained general physicians in both rural and urban areas where the Department of Community Health Science (CHS) has developed model primary health care programmes, discussions regarding development of a family practice residency began in 1986. The residency programme was established in 1989, currently has 3 residents and is still under-development. Our efforts to date (May 1991) are described below.

A critical step in designing the residency training programme was to identify the specific knowledge, attitudes and skills required of the model family physician. These were determined from morbidity and mortality data and surveys from our primary health care centres as well as national health statistics[11,12]. These components were translated into specific competencies the graduate should have at the completion of the residency. These competency based objectives were then categorized into clinical and field components so that specific learning modules to assure adequate exposure to field or clinical problems could be woven into a framework to accomplish the overall objectives. We feel the competencies listed below of the family physician graduate reflect the needs critical for delivery of primary health care in Pakistan. Though the residency has many similarities to training for generalist physicians in the West, the emphasis on clinical conditions prevalent in Pakistan, preventive medicine and control of infectious diseases, community medicine organizational and leadership skills and the use of appropriate technology allows the graduate to develop competence in areas of local need.

Family Medicine Residency Objectives*

After completing the family medicine residency the graduate should be able to:

1. Diagnose and treat common, ambulatory, organic, infectious and functional diseases.
2. Educate patients and communities regarding measures for disease prevention and control which are achievable within the existing socioeconomic and cultural context.
3. Understand the impact of illnesses on individuals, their families and communities.
4. Analyze the influence of social, economic and environmental factors on the health status of individuals and groups and suggest appropriate corrective measures.

5. Understand the roles of governmental and private organizations in health care delivery.
6. Learn to maximize the use of limited resources for efficient and equitable health service delivery.
7. Promote community participation in solving health problems.
8. To work effectively as a member of a primary health care team providing supervisory and back up support.
9. Use medical record and management information systems to assure quality and continuity of patient care and to generate information appropriate for improving health care at all levels.
10. Recognize the need for continuous and self directed professional medical education to update knowledge and skills. (*adapted from Adjou-Moumouni5. The first 3 objectives are primarily clinical: understanding the prevention and treatment of common diseases. The next are related to the understanding and implementation of community medicine and public health measures and empowering communities to solve their own health problems. The last are common to all medical specialities. In order to accomplish the training objectives, the curriculum requires the integration of experience in disparate clinical and field sites.

TABLE I. Family Medicine Residency
Department of Community Health Sciences, Aga Khan University.

Year 1		Hospital rotations			
Internal Medicine 3 months		Pediatrics 3 months	Obstetrics/Gynecology 3 months		Surgery 3 months
		Family Practice and Core Curriculum			
Year 2		Outpatient roations			
Orthopedics 1 month	ENT/ Opthalmology 1 month	Psychiatry Dermatology 1 month	Pediatric Ambulatory emergency 2 months	Internal Medicine (Outpatient) 2 months	North/Rural 3 months
		Family Practice Centre and Core Curriculum			
Year 3					
Family Practice Centres: CHC and urban field sites 6 months			Electives 6 months		
		Core Curriculum and research ongoing			

Notes:
- Rotations in year 2 and 3 not necessarily in order.
- Family Practice Centres include field clinics and community health centre and both curative and community health activities (2 days per week in year 2 and 3 except during full time block).
- Research should be concurrent with other rotations in year 3.
- Core Curriculum is 90 minutes per week throughout the programme.
- One month of vacation in each year.

The overall scheme for training is presented in Table I with time allocation for various subdivisions indicated. Notable is the wide variety of experience required. This variety reflects the breadth of the field of family medicine and requires close communication with a large number of primary care physicians and subspecialists to orient them to the training objectives and overall needs of family physicians, a speciality just gaining recognition in Pakistan. Exposure to a wide variety of clinical and field training sites is important, as is a mechanism for uniting these disparate experiences into a

meaningful whole and providing a basic core of information essential to the objectives. This core experience is provided through training in family practice centres in the field sites and within the hospital and is strengthened by a core curriculum. The core curriculum brings the residents together once a week for didactic instruction, discussions and problem solving in the following areas (Table II).

TABLE II. Core Curriculum in Family Medicine.
(weekly sessions ninety minutes in length)

Year 1	
	Nutrition
	Infectious diseases
	Preventive health care for children and adults
	Common ambulatory medical problems
Year 2 and 3	
	Biostatistics
	Epidemiology
	Demography
	Primary health care management
	Research methodology and data analysis
	Computer applications in medicine
	Health system development
	Health education
	Communication skills
	Community dental health
	Behavioural medicine and community mental health
	Medical anthropology
	Office practice management

Emphasis is on practical applications of knowledge to real problems encountered in the field and clinical sites. The family practice centres are the primary focus of clinical and field training where residents relate their knowledge to practical problems in ambulatory clinical practice and problems of primary health care team management. Clinical care is delivered in two different settings: the Community Health Centre (CHC), an ambulatory clinic located within the Aga Khan University Hospital (AKUH), where consultants and diagnostic services are readily available and in the primary health care centres in urban and rural field sites, with limited access to diagnostic and treatment facilities. While the CHC experience allows residents to develop clinical expertise, the field sites give the residents a more realistic basis of experience for practice in underserved areas with limited resources. Involvement with community health nurses and workers, home visiting, community interaction and educational activities, participation in data collection and analysis for the management information systems, participation in ongoing research in the field sites as well as a required individual research project, round out the field experience for a greater experiential background in community

health. In addition to the urban field experience near AKUH, plans are in progress to require all residents to complete a three month rural rotatibn. This experience, either in the mountainous northern areas or in rural Sindh will provide the resident with greater understanding of the problems, resources and limitations of health services in rural regions. During the rotation, residents will participate in clinical care of patients as well as becoming an integral member of the rural primary health care team.

Career Options for Family Physicians in Pakistan.

Due to the previous lack of postgraduate training options in family medicine and a relative shortage of specialists with these qualifications, a wealth of opportunities exists for future career options. These include clinical, academic, administrative and research possibilities. Clinical opportunities include private or group practice in ambulatory or hospital settings. The clinical practice would include primary health care delivery to patients of all ages. This could be at the primary or district level where appropriately trained generalists are sorely needed. It may or may not include hospital practice, with care of inpatients, obstetric deliveries and surgical assisting depending on individual preference and practice location needs. Training for performance of more technical clinical procedures such as caesarean delivery may be arranged if a resident knows they will be practicing in a location requiring these specialized skills. Academic opportunities include the teaching and development of family medicine. The Pakistan Medical and Dental Council advocates training in family medicine (general practice) at the undergraduate level but lacks qualified teachers[6]. With current needs, it is hoped that programmes in family medicine will be established at medical schools throughout Pakistan. Leadership will be needed for these programmes and graduates would meet these needs. Family physician graduates will also be in a good position to enter public health leadership positions. With their background and familiarity with all primary health care sub-specialities, their training in preventive and community medicine and their integrated clinical and public health knowledge and skills, they will be in a uniques position to bridge the gaps between community and clinical medicine and work as important facilitators in integrating the two. Since the residency programme requires an independent research project as well as exposure to research projects in progress in CHS, graduates will have a basic understanding of how to conduct medical research. Some with particular interest may want to further develop their research expertise through fellowship training or a Masters degree in Public Health. Others may become valuable contributors to ongoing research in community based health care projects.

Obstacles to development of Family Medicine and strategies to address these.

Effective delivery of primary health care services to all the people of Pakistan has been one of the casualties of underdevelopment political instability, rapid population growth and economic stagnation. The country is struggling to address the needs for quality health services through implementation of national health plans but is hampered by constrained economic resources. Factors within the medical profession compound these difficulties. These factors include the lack of appropriate training in family medicine in undergraduate medical school curricula, the poor image of the family physician as compared to other specialists, marked income differentials, lack of postgraduate training programmes, limited opportunities of continuing medical education after postgraduate training and absence of a career ladder. Additionally, poor living conditions, limited access to good schools and lower financial incentives compound the difficulties of providing health services in rural areas. The CHS department is struggling to deal with these issues in the context of the socio-political and economic factors of underdevelopment. First, through collaboration with the government in developing schemes for effective and comprehensive primary health care delivery. Secondly, through collaboration with the College of Physicians and Surgeons of Pakistan, a diploma in family medicine examination has been developed and plans are underway to institute this at the fellowship level, making this an officially recognized speciality. This will begin to address the issue of career structure and public recognition. Finally, with further development and refinement of the first Pakistani Family Medicine Residency training programme (training manual available on request), it is hoped that this will serve as a model for similar programmes in Pakistan and other developing countries. These efforts are only first steps in

a long process of development. We need sufficient numbers of appropriately trained family physicians in order to provide health care that is effective in addressing the health care needs of the people of Pakistan.

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