The role of national medical education in Kuwait

Khaled F. Al-Jarallah[1], Mohamed A. A. Moussa[2]

Objectives This study highlights the role of national medical education in the promotion of medical manpower. This was emphasized through tracking the development in the size and professional structure of the main category of the Kuwait national health care delivery system, the physicians, throughout the years 1996 to 2001.

Methods Data were ascertained from three sources: Department of Vital and Health Statistics and Department of Manpower, Ministry of Health for data on physicians, and Department of Statistics and Information Sector, Ministry of Planning, Kuwait for data on population.

Results The study revealed increasing trends toward employment of Kuwaiti female physicians, employment of Kuwaiti physicians to upper and lower ranks, and rarity of Kuwaiti physicians in some specialties, such as anesthesia.

Conclusion The study emphasized the role of national medical education in increasing the number of Kuwaiti graduates. Moreover, the study highlighted the apparent influence of KIMS in enhancement of higher medical specialization training programs as witnessed by the predominance of Kuwaiti physicians in the leading job categories. Besides, the study generated essential information required for planning the qualitative and quantitative pattern of the higher specialization programs.

Key words: Health manpower, physicians, health care delivery system, medical education, Kuwait.

Bull Kuwait Inst Med Spec 2007;6:13-17

Introduction

There were many social and cultural changes in Kuwait during the last four decades. The consequences of these changes influenced, among other issues, the health status of the population, and hence the distribution of the quantity and quality of health manpower. Other effects of the changes which were relevant to health manpower and health care delivery systems were: rapid urbanization; the increasing numbers of females employed; the changing structure and content of medical education; professional redistribution in various social dimensions; and modification in life-style.[1]

Most countries operate according to five-year health planning cycles along with other sectors. Long-term projections are also made on a conceptual level. As the health status of the population is regarded as one of the main factors influencing the quality of life, the health service system has a priority in the national budget.[2-5]

There is progressive increase in diagnostic and therapeutic facilities which demands a higher degree of manpower specialization. The priority of disease prevention, e.g. mass screening, vaccination, is also a factor which increases manpower needs.

The maldistribution of health manpower, particularly physicians, is well documented. While no one argues that tertiary or even secondary medical services should be uniformly distributed across the country, there seems to be general agreement that primary care manpower should be equally distributed in all areas.[3] Also the various postgraduate medical education programs have not yet been adequately adjusted to the specialty saturation.

Women physicians may have pressures different from men because of a higher likelihood of choosing primary care fields, their communication styles, issues of multiple roles, and discrimination.[6,7] Although more

[1]Secretary General, Kuwait Institute for Medical Specialization
[2]Department of Community Medicine, Faculty of Medicine, Kuwait University; Head, Research Unit, Kuwait Institute for Medical Specialization.

Correspondence: Prof. M. A. A. Moussa, Department of Community Medicine, Faculty of Medicine, P.O. Box 24923 Safat, 13110 Kuwait.
Tel.: 965 5319485, Fax: 965 5338948,
E-mail: amoussa@hsc.edu.kw

women are entering medicine, there are still gender-linked issues thought to be barriers to satisfaction. Age, children and multiple-role issues, high work stress, specialty choice, and practice sites were strong predictors of all the measures of professional dissatisfaction.

Policies that alter expected relative income, length of residency, desired location of practice, medical school attended, predictable working hours, and prestige of practice, rather than financial aid, may be appropriate for correcting a perceived maldistribution of physicians among specialties. There are currently over 30 recognized medical specialties and perhaps as many as 80 subspecialties.

Health professions development is an integral part of national health plans. It is influenced by various factors and should be updated to meet the changing health situation and related disciplines of the country. There are three forms of establishing a health manpower development plan: a market-oriented form, a goal-achievement form, or a standard form through adopting a successful system in another country with similar socioeconomic conditions. A combination of all forms is best if carried out by a community-oriented team of academic health professions and health care providers. Although countries of Middle Eastern Region share many demographic, geographic, and sociocultural characteristics, there are marked differences in resources, health manpower structure and availability in health services. Health professional development plans should be formulated according to existing situations. Other factors influencing health manpower development in the future include political, social and economic trends, changes in morality and disease patterns, industrialization, availability of health services and academic institutions.[8]

Monitoring health manpower is a dynamic process, and should be continuously conducted due to the rapid social and cultural changes in the population. The study of health manpower provides answers to many important questions for health planners concerning the optimal strategies that would lead to integration of health services.

The aim of the study is to emphasize the role of national medical education in the promotion of medical manpower. This was achieved through tracking the development of the size and professional structure of physicians in Kuwait and their distribution in different specialties throughout the years 1996 - 2001.

Methods

This is a population based review of the main health manpower category: the physicians in the Kuwaiti national health care delivery system in order to reveal the changes that occurred as a consequence of initiating the national medical education in Kuwait. Sources of data were the Vital and Health Statistics Department [9] and the Department of Manpower[10], Ministry of Health for data on physicians, and the Statistics and Information Sector, Ministry of Planning, for data on population.[11] The data reported on physicians by the two departments were checked for consistency, and any discrepancies were followed-up and resolved. Accumulated data included information about physicians employed by the national health care system of Kuwait during the 6 years, 1996 to 2001 with respect to: gender, nationality, job category, higher specialty and subspecialty.

Results

Table 1 depicts the distribution of physicians according to gender and nationality (Kuwaiti vs. non-Kuwaiti). A distinct feature of this distribution is that female Kuwaiti physicians exceed female non-Kuwaiti physicians in multitude. On the contrary, the number of non-Kuwaiti male physicians is almost three times the number of Kuwaiti male physicians. Besides, there is a trend towards an increase in the number of physicians throughout the years. In 1996, the total number was 2,934 compared to 3,302 in 2001, i.e. 12.4% increase. However, the number of physicians per 1000 population dropped from 1.55 in 1996 to 1.45 in 2001.

Table 2 presents the distribution of physicians employed by the Kuwait national heath care system during the studied years according to nationality and job category. The lower ranks (resident and assistant registrar) were taken up by Kuwaiti graduates, mainly from Kuwait University. This is a direct consequence of establishment of the national medical education system in Kuwait. On the contrary, non-Kuwaiti physicians were more predominant (about 5 times) in the middle rank

Table 1. Distribution of physicians in the Kuwait national health care system according to gender and nationality (1996 – 2001)

Year	Kuwaiti			Non-Kuwaiti			Total	K: NK ratio	Population*	No. of physicians/ 1000 population
	M	F	M: F ratio	M	F	M: F ratio				
1996	538	452	1.19: 1	1,565	379	4.13: 1	2,934	1: 1.96	1,894,362	1.55
1997	575	469	1.23: 1	1,588	382	4.16: 1	3,014	1: 1.89	1,979,689	1.52
1998	621	509	1.22: 1	1,577	389	4.05: 1	3,096	1: 1.74	2,027,103	1.53
1999	663	536	1.24: 1	1,588	416	3.82: 1	3,203	1: 1.67	2,107,195	1.52
2000	646	524	1.23: 1	1,611	424	3.79: 1	3,205	1: 1.74	2,189,668	1.46
2001	679	589	1.15: 1	1,609	425	3.79: 1	3,302	1: 1.60	2,274,980	1.45

*Estimated mid-year population
M= Male, F= Female; K= Kuwaiti, NK= Non-Kuwaiti

Sources: Manpower Department, Ministry of Health
Health and Vital Statistics, Department of Statistics and Medical Records, Ministry of Health
Annual Statistical Abstract (2000), Statistics and Information Sector, Ministry of Planning

'Registrar' than Kuwaiti physicians. In fact, the number of Kuwaiti registrars decreased from 466 in 1996 to 199 in 2001 (57.3%). Similar pattern happened among primary care general practitioners, where non-Kuwaiti physicians are almost 10 times the number of Kuwaiti practitioners. With respect to higher ranks (consultant, specialist, senior registrar), there was a trend towards an increase in the number of Kuwaiti physicians. This emphasizes the role of KIMS in enhancing the postgraduate training and developing a national pool of senior clinical specialists.

The distribution of physicians according to higher specialty was also studied. It is evident that Kuwaiti female physicians predominate Kuwaiti male physicians in the specialties of obs. & gyn., pediatrics and family medicine. Females are also prevalent in lab medicine. On the other hand, Kuwaiti male physicians surpass Kuwaiti female physicians in the specialties of surgery and internal medicine. Administration positions are mainly occupied by Kuwaiti male physicians. It is clear that some specialties like anesthesia and public health are mostly occupied by

Table 2. Distribution of physicians in the Kuwait national health care system according to nationality and job category (1996 -2001)

Job Category	1996		1997		1998		1999		2000		2001	
	K	NK	K	NK	K	NK	K	NK	K	NK	K	NK
Consultant	5	7	13	22	14	39	22	59	21	43	23	47
Senior specialist	27	61	33	63	45	66	57	78	53	69	77	71
Specialist	7	79	57	107	68	82	70	88	61	102	76	107
Senior general practitioner	1	5	14	8	16	7	14	7	21	9	23	7
General pract./ Family med.	52	598	95	577	68	560	71	574	66	560	56	550
Senior registrar	9	32	57	85	85	111	93	98	116	142	112	137
Registrar	466	1,111	205	1,054	193	1,040	184	1,044	195	1,049	199	1,056
Assistant registrar	199	41	353	41	435	44	440	44	550	51	557	50
Resident	169	6	134	2	124	2	178	2	25		82	1
Administration	55	4	83	11	82	13	70	10	62	10	63	8

K= Kuwaiti; NK=Non Kuwaiti

Sources: Department of Manpower, Ministry of Health.
Health and Vital Statistics, Department of Statistics and Medical Records, Ministry of Health.

non-Kuwaitis, while Kuwaiti physicians are rare.

Discussion

This review investigates the influence of establishment of national medical education through tracking the development in the professional structure of the main component of the health care delivery system in Kuwait throughout a period of 6 years. This evaluation process should be continuously performed in order to reveal deficiencies and redundancies in different specialties, and to monitor the professional structure of the medical staff manpower.[8] It is also important for the health authorities to remedy deficiencies and avoid overproduction of saturated specialties. These corrective measures would lead at the end to a balanced medical workforce.

The increment of female Kuwaiti physicians was noted along the studied years, particularly in the specialties obs. & gyn., pediatrics and family medicine. This finding is in concert with other studies.[6,7] This result is the outcome of the rapid social and cultural transitions occurring in Kuwait as a consequence of globalization.[1]

Besides, there was a trend towards increase in the number of Kuwaiti physicians employed by the health care system. This important finding is the fruitful outcome of the establishment of national medical education in Kuwait, represented by the Faculty of Medicine, Kuwait University and the Kuwait Institute for Medical Specialization (KIMS) for higher specialization training programs.

The Faculty of Medicine, Kuwait University was established in 1973 with the objectives of producing high quality health care professionals and medical scientists, and playing a major role in the development and upgrading of the national health care system in Kuwait. Since its establishment, the Faculty of Medicine has developed into an internationally recognized medical school, serving Kuwait and the Gulf region. Seven departments are currently running M.Sc. graduate programs, three of them are also running Ph.D. programs.[12]

The Kuwait Institute for Medical Specialization (KIMS) of the Ministry of Health, which was established in 1984, is the body responsible for organizing all aspects of postgraduate training of medical practitioners and other health professionals in Kuwait. The main aims of KIMS are to enhance the level of competence of health professionals, enabling them to keep abreast of the developments in the medical specialties and patient management; prepare graduates in the health professions for specialization in the different branches of medicine; provide facilities and opportunities for continuing professional development, and monitor their progress and achievement. Among other specific objectives, KIMS aims at developing a national pool of medical specialists needed for managing health care needs. Prior to the establishment of KIMS, postgraduate training for higher professional specialization was undertaken by the Training Division of the Ministry of Health.[13]

Recently, a study[14] has been conducted on the Kuwaiti physicians who attained their higher specialization under the supervision and guidance of KIMS during the last three decades. In this investigation, the distribution of higher specialization was presented and the rarity of some subspecialties was revealed. In spite of this progress in medical education, the national health care system still heavily depends on non-Kuwaiti physicians to fill the gaps in many specialties. In fact, the number of non-Kuwaiti physicians is almost 3 times the number of Kuwaitis. Some specialties like anesthesia and public health are mainly managed by non-Kuwaiti physicians. This result indicates that there is still a long way before the national health care system can totally rely upon Kuwaiti physicians. Consequently, the national medical education system has a major role for the realization of sufficiency in medical workforce.

Kuwaiti physicians are assigned to either the lower ranks (resident, assistant registrar) or higher ranks (senior registrar, specialist, consultant). In the middle rank (registrar), non-Kuwaiti physicians are prevalent. The reason for this distribution of ranks is the accumulation of Kuwaiti graduates from the national medical education system, and the appointment of these graduates to low rank positions. On the other hand, the predominance of Kuwaiti physicians in the leading senior job categories is attributed to the in-

tensive facilities provided by KIMS which enable Kuwaiti graduates to enroll in higher specialization programs shortly after graduation and hence securing higher ranks.

In conclusion, the study highlighted the role of national medical education through reviewing the size and professional structure of physicians working in the national Kuwait health care delivery system. It clearly revealed important trends in the quality of employed physicians. More Kuwaiti females entered the medical profession. Kuwaiti physicians are assigned to either the lower or the higher ranks as a result of the establishment of the national medical education system, and higher specialization training programs by Kuwait University and KIMS. Non-Kuwaiti physicians occupy the middle ranks and still outnumber Kuwaiti physicians.

Acknowledgements

The authors thank Dr. Abdul Aziz Khalaf, Department of Statistics and Medical Records and Mr. Mezyed Al-Mezyed, Department of Manpower, Ministry of Health, Kuwait for providing the data. Mrs. Khadija Al-Khanfar assisted in data processing and preparation of the manuscript.

References

1. Mosley WH. Population change, health planning and human resource development in the health sector. *World Health Stat Q* 1994;47:26-30.
2. Forgacs I. Strategies and techniques for the implementation of health manpower and other health projections: the case of Hungary. *World Health Stat Q* 1984;37:256-70.
3. Morrow JH, Edwards AB. U.S. health manpower policy: will the benefits justify the costs? *J Med Educ* 1976;51:791-805.
4. Kohrs FP, Mainous AG. The relationship of health professional shortage areas to health status. Implications for health manpower policy. *Arch Fam Med* 1995;4:681-5.
5. Ewing DJ. Medical staffing in the National Health Service in Scotland in 1992. *Health Bull (Edinb)* 1993;51:430-43.
6. Kletke PR, Marder WD, Silberger AB. The growing proportion of female physicians: implications for US physician supply. *Am J Public Health* 1990;80:300-4.
7. Dennis T, Harris I, Petzel R, et al. Influences of marital status and parental status on the professional choices of physicians about to enter practice. *Acad Med* 1990;65:775-7.
8. Gabr M. Health professions development. *Med Educ* 1995;29:72-5.
9. Ministry of Health. *Distribution of Manpower by Job Category, Nationality and Sex*. Kuwait: Health and Vital Statistics, Department of Statistics and Medical Records, Ministry of Health; 1998.
10. Ministry of Health. *Distribution of Manpower by Job Category, Nationality and Sex*. Kuwait: Department of Manpower, Ministry of Health; 2001.
11. Ministry of Planning. *Annual Statistical Abstract*, 37th ed. Kuwait: Statistics and Information Sector; 2000.
12. Kuwait University. *Faculty of Medicine, Undergraduate Handbook*. Kuwait: Kuwait University, Health Sciences Center; 2002.
13. Ministry of Health. *Speciality Choices of Kuwaiti Medical Graduates During the Last Three Decades (1968-1999)*. Kuwait: Kuwait Institute for Medical Specialization (KIMS); 2001.
14. Al-Jarallah KF, Moussa MAA. Pattern of postgraduate specialization of Kuwaiti medical graduates throughout the last 30 years. *Bull Kuwait Inst Med Spec* 2002;1:2-7.