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Health Services Management in Qatar

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Aim To assess health care delivery system in the State of Qatar and audit it according to the Joint Commission International (JCI) standard.

Methods The data for this retrospective descriptive study were taken from the Annual Health Report of the National Health Authority and Hamad Medical Corporation and various additional sources like World Health Organization reports, Annual Report of Saudi Arabia, and Compendium of Health Statistics, UK. Population per physician, per general practitioner, and per hospital bed, and nurses per physician ratio were calculated.

Results In 2008, the population per physician in Qatar was 444; the population per general practitioner (GP) was 949; the population per hospital bed was 716; and nurses per physician ratio was 2.6. During the last decade, the population of Qatar has more than doubled, which has resulted in a similar increase in the number of health care providers; moreover, many initiatives launched in cooperation with internationally recognized institutions have greatly improved the quality of the health service. The weighted mean number of visits for 100 population was calculated for the UK and Qatar, taking into consideration the difference in age and sex structure. After comparison with the UK data, population/GP ratio for Qatar should be 1193.

Conclusion The Qatar health system has improved in the last decade, but there is still the need for more medical workers in primary health care.

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Inequitable geographic distribution of health care resources has long been recognized as a worldwide problem (1-9). Sufficient human resources are clearly a prerequisite for adequate health care. In turn, health care is one of the determinants of population health along with socioeconomic, environmental, and behavioral factors (1).

Most surveys show that patients are satisfied with the general practice care they receive, but often perceive that the consultations are too short and that physicians do not use them well (2). Generally, it is not easy to compare specialist and primary care load and performance, since consultations about psychosomatic and behavioral problems last longer than those about other problems (2). The length of consultations is a frequent patients' concern. However, it can be used as a marker for quality of consultations in health care assessment (2).

The aim of this study was to examine the provision of health services in the State of Qatar with a special emphasis on primary health care (PHC) and to compare it with that in other low, medium, and high income countries.

METHODS

The data used for this study were taken from the Annual Health Report of the Ministry of Public Health and Hamad Medical Corporation and published in the Annual Health Report 2008 (3). This report contains population and vital statistics, leading causes of death, health care expenditures, hospital services, number of medical staff per 100 000 population, hospital beds available per 100 000 population, population per bed, population per pharmacist, population per nurse, and general family health services in Qatar. Additional data were obtained from various sources, including Government Health Statistics, National Health Authority and Annual Health Report 2008 (2), Compendium of Health Statistics in UK (4), and World Health Organization Human Resources for Health and Development Estimates of Health Personnel (5-7). Also, Health Statistics for Arabian Gulf States and Western Countries were taken from the World Health Organization Statistics Report (8) and World Bank Report (2004) (9).

RESULTS

The State of Qatar is situated on a 160 km-long peninsula on the western coast of the Arabian Gulf. It occupies a total area of 11 493 km^2, including the islands. The estimated population in 2008 was 1 448 449 (75.72% men and 24.28% women), 70% of which were expatriates. By wisely using the revenues from oil and gas, Qatar has built a sophisticated social and health infrastructure. The investment in health and social development has result-

TABLE 1. Health service performance in Qatar during a period 1998-2008*

	Year		
Variables	1998	2003	2008
Leading causes of deaths (%):			
cardiovascular	36.2	20.3	14.5
traffic accidents; poisoning	15.6	17.8	22.4
cancer	10.1	9.2	9.0
endocrine, nutritional and metabolic diseases	3.1	12.0	5.2
congenital malformation	6.2	5.8	3.1
other causes	28.8	35.0	45.9
Incidence rates of selected infectious diseases/10000:			
measles	2.14	0.33	0.70
rubella	0.68	0.48	0.85
meningococcal infection	0.15	0.79	0.85
typhoid paratyphoid	0.29	0.97	0.81
malaria	4.88	1.28	1.49
viral hepatitis	1.80	21.17	12.32
pulmonary tuberculosis	2.56	2.18	2.11
chicken pox	29.01	31.31	39.07
mumps	1.99	1.33	2.04
shigellosis	0.0	0.76	0.33
Hospital services:			
primary health care centers (No.)	32	30	30
population/center	16979	24138	48282
hospitals (No.)	3	6	9
beds (No.)	1253	1468	2023
beds per 1000 population (No.)	2.31	2.03	1.40
rate of bed occupancy	78.0	75.5	81.3
average days of stay	6.8	6.9	4.7
discharge daily average	124	140	167
population/operation	34.01	36.96	51.53
population/daycare surgery	61.27	48.6	94.61
percentage of hospital deliveries	98.24	98.44	98.34
consultation length in minutes per patient	5.8 ± 2.4	6.6 ± 2.1	6.9 ± 2.5
Personnel:			
physicians (No.)	968	1624	3259
physician/bed	0.8	1.1	1.6
nurse/bed	1.9	2.8	4.2
population/physician	561	446	444
population/dentist	3528	2577	1786
population/pharmacist	1386	991	1099
population/nurse	226	179	172

*Annual Health Report. Vital Health Statistics (3).

ed in dramatic gains in the health and well-being of the people. The proportion of health expenditure excluding private sector was 3.1% of GDP.

Table 1 shows some selected health indicators and health services in Qatar. In 2008, the population per physician was 444, population per GP was 949, and population per hospital bed was 716. Road traffic accidents and poisoning were ranked as the number one cause of death (22.4%). The infectious disease with the highest incidence rate per 10 000 was chicken pox (39.07%). The population per physician (1:444) was very close to that in the UK (1:417), a representative of economically developed countries.

In the period from 2000-2008, the population of Qatar increased from 578 500 to 1 448 499 (3). The increase in population reflected in a greater demand for physicians, which explains the rise in the number of health care providers from 4707 (1.48 health care providers per 1000 population) to 11 949 (2.24 health care providers per 1000 population). In addition to the growing number of health care professionals, numerous new internationally recognized institutions have launched their initiatives in Qatar, thus considerably improving the quality of the health care system in the country.

Table 2 shows some selected health services indicators for various low, middle, and high income countries. It is clear that the European countries and the US generally have better population/physician and population/beds ratios than various Arab, Gulf Cooperation Council, and Middle East countries.

DISCUSSION

We estimated the ratios of health services delivery and utilization in Qatar, which was an extremely difficult task due to a lack of reliable data. Underdeveloped nations have a low physician/population ratio – 1:10 000 in the Philippines, 1:7143 in Sri Lanka, 1:1667 in Tunisia, and 1:1429 in Pakistan. Oil-rich countries have somewhat higher ratio – 1:667 in Kuwait, 1:714 in Saudi Arabia, 1:769 in Oman, and 1:625 in Bahrain, but still lower than the developed nations – 1:182 in the USA, 1:303 in Germany, and 1:333 in Sweden (8,10). However, the ratios do not always correlate directly with development; Cuba has physician/population ratio 1:439 and Egypt 1:476. We may note that physician/population ratios do not differ among various specialties and cannot accurately show whether there is an over- or undersupply of physicians. For example, in the USA it is generally acknowledged that there is an oversupply of surgeons and

TABLE 2. Some selected health services indicators for various low, middle, and high income countries*

Country	Year	Population/physician	Physician/1000 population	Year	Population/bed	Bed/1000 population
Croatia	1997	442	2.3	1997	185	5.4
UK	2006	417	2.5	2006	277	3.6
USA	2006	417	2.4	2006	312	3.2
Australia	2005	370	1.82	2004	249	4.0
Sweden	2005	294	3.4	2005	455	2.2
Greece	2005	204	4.9	2005	263	3.8
Germany	2006	286	3.5	2006	120	8.3
Qatar	2008	444	2.25	2008	716	1.4
Kuwait	2005	556	1.8	2005	526	1.9
Oman	2005	588	1.7	2006	476	2.1
Bahrain	2005	370	2.7	2006	370	2.7
Saudi Arabia	2004	730	1.4	2005	435	2.3
UAE	2007	518	1.93	2007	546	1.86
Egypt	2005	416	2.4	2005	455	2.2
Libya	2004	769	1.3	2006	258	3.7
Syria	2006	1879	0.5	2006	714	1.4
Tunisia	2004	746	1.3	2006	526	1.9
Iraq	2005	1428	0.7	2005	769	1.3
Jordan	2005	416	2.4	2006	526	1.9
Pakistan	2004	1250	0.8	2003	833	1.2
India	2004	1667	0.6	2002	1429	0.7

*World Health Organization Statistical Report 2004 (8) and World Health Report 2007 (10).

if these physicians are included in the physician/population ratios, the delivery of general health care seems better than it actually is (8,10).

Various internationally accredited recognized institutions have contributed to the improvement of Qatar's Health Care System over the last decade. For instance, the Pasteur Institute, Imperial College, the University of Pittsburgh, Weill Cornell Medical College, Heidelberg University Hospital, and Mayo Clinic have all contributed to the improvement of the clinical, laboratory, diagnostic, and research facilities in Qatar. Moreover, the Joint Commission International accreditation which began in 2005, has greatly improved the quality of health care management (11,12).

Longer consultations are associated with better quality of care for patients with chronic conditions; a more recent study from Qatar (2) reported that the consultation length with GP was 6.6 minutes per patient per year (Table 1). This means that in 40 weeks with 6 working days, a primary care physician in Qatar sees 69 patients per shift or 9 per hour. Many studies agree that consultations shorter than 10 minutes do not have a significant effect on health promotion (2). In British general practice, the consultation time averaged 9.4 minutes (4) and in the United States 13 minutes (2).

The number of primary health care workers is still very low in Qatar (8.9%). Over 76% of physicians work in tertiary care and since postgraduate training is not well developed, these are almost entirely in non-training grades (8.9%). In wealthier countries, such as Australia and the UK, this percentage is much higher (43% and 40%, respectively).

It seems that a health service based on the principles of primary health care ought to take into account the parameters which reflect the care given to individuals at the health center level: 1) the population served by a family physician (GP); 2) the number of the primary health care workers and the education and seniority of the primary health care medical workforce. Finally, international Collaboration and JCI accreditation have improved the quality of health care in Qatar in the last decade.

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