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THE QATAR HEALTH SYSTEM: CHALLENGES AND OPPORTUNITIES

Review Article

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Abstract

Qatar's healthcare system is comparatively new and has experienced noteworthy developments over its brief history. In this paper, our aim is to look at the unique challenges this small nation has faced in building that system. This paper will describe the accomplishments of Qatar's medical authorities and the challenges they faced. It will also compare public and private healthcare providers. Today, the government of Qatar has financed all the health care for this rapidly-developing, multicultural nation, but it is now planning to introduce medical insurance. This report of its experience will benefit other nations wanting to develop their own healthcare systems.

METHODOLOGY

PubMed is a search engine that accesses references and abstracts on biomedical topics. We utilized Medical Subject Headings (MeSH) —a controlled vocabulary used for indexing journal articles and books. *Key words:* Qatar, medical services, Qatar Healthcare services, therapeutic advancement, medical foundation, private healthcare providers, medical protection, medical history. Other data sources included the websites of the CIA World Factbook, the Qatar Ministry of Health, the Hamad Medical Corporation, the Organization for Economic Cooperation and Development (OECD), and the US State Department.

THEORETICAL BACKGROUND

Healthcare advocates have traditionally focused their attention on nations with low to moderate wealth, with limited access to healthcare and medical infrastructure. But there are many lessons to be learned from looking at the medical systems of richer nations, for example, some of the members of the Organization for Economic Cooperation and Development (OECD). This paper investigates the comprehensive health services that are now available in Qatar, whose goal is to become the new pioneer in medical services, instruction and culture in the Arab world. So it is beneficial—indeed critical—to take a close look at its general history, culture, and socioeconomics.

INTRODUCTION

The sovereign state of Qatar is on a little peninsula reaching out into the Middle East. Saudi Arabia is to its west and the United Arab Emirates lie to the south. One of the world's richest nations (McMullan, 2016), Qatar has the second biggest GDP per capita of \$70,000, through sales of oil and petrol gas (UNDP United Nations Global Development Network, 2014) and the fifteenth best healthcare system on the planet (Martin, 2017) (Legatum Institute, London)

The land is mostly desert, and until the midtwentieth century, its basic income came from angling and pearl div ing. Following the discovery of oil in the 1940s, the nation began to expand its wealth from the 1950s and 1960s. As of now, eighty-five percent of Qatar's income originates from the sale of oil and flammable gas (GEO ExPro, 2014; Sorkhabi and Morton, 2014). In spite of a general recession, Qatar's Gross Domestic Product continues to grow at the rate of 9 percent every year. Oil and gas make up half of its GDP, providing 92 percent of Qatar's export income and

70 percent of the government's income (CIA, 2016).

When Sheik Hamad bin Khalifa Al Thani became Emir Sheik Hamad in 1995, he brought in some democratic reforms, including law-based elections, and lifted some press controls (Qatar Foundation, 2017). In 1999, Qatari women won the right to vote. In June 2013, the Sheik's son, Amir Tamin bin Hamad al Thani, peacefully took over as the new Emir (BBC News 2013). Qatar is currently viewed as a protected government. The primary constitution, established in 2005, permitted, among other things, freedom of expression, assembly, and religious speech (Al Dulaimi, S.H. and Bin Sailan, M.S. (2011)

In 2005, the nation set up the Qatar Financial Center, which brings in money from business conferences and multinational gatherings. Since then, Qatar has pulled in an estimated income of \$100 billion. The nation is expected to invest approximately \$120 billion in its energy sector over the next ten years (QNDS 2016). It is estimated that Qatar has spent more than \$140 billion on development and improvement.

Qatar joined the OECD Global Gathering in 2009 and agreed to follow its protocols of transparency and the exchange of data. On 22 April 2016, it also became a participant in the Development Assistance Committee or DAC. (OECD, 2016.)

About a fifth of Qatar's population is native. With 2.6 million people, including 2.3 million expatriates, the nation ranks 146th in the world in terms of population density. Twenty percent of the Qatar workforce comprises expatriates from the Arab world. (Ministry of Development Planning and Statistics, MDPS, 2016). Qatar ranks second in terms of immigration, with a net immigration rate of 27.35 per 1000.

The median age of Qataris is 33 years and more than three-quarters of the population is Muslim (CIA Factbook, 2016). Just over a tenth of the population is under fourteen years old and 85.5 percent of the population is between fifteen and sixty-five. Qatar has a tiny percentage of senior citizens, with only 1.1 percent of the population aged over 65. Statistics in 2015 show a birth rate of 11.81 per 1000 population, making Qatar 194th in the world. As a nation, it also boasts the world's lowest death rate, with 1.49 deaths per 1000, (Ministry of Development Planning and Statistics, Population, Births & Deaths in the State of Qatar—Review & Analysis, 2015).

THE ESTABLISHMENT OF A HEALTHCARE SYSTEM IN QATAR

Qatar's healthcare system is comparatively new and has experienced noteworthy developments over its brief history. In this paper, our aim is to look at the unique challenges this small nation has faced in building its healthcare system. We hope that the lessons gained from our research will be helpful to other nations who are seeking to create similar medical infrastructures.

Medical services in Qatar must be seen in the light of its financial prosperity and the vision and rules established by the last Emir, HH Sheik Hamad Bin Khalifa Al-Thani. The first medical facility in Qatar, Rumailah Hospital, was founded in 1957 and is now part of the nation's large public healthcare system. There are presently 39 hospitals and numerous clinics in Doha, the capital city (Qatar Health System—Ministry of Public Health, 2017). Health centers have also been built along main roads, for better access. The Emir has given billions of dollars of public expenditure to create both a world-class education system and an excellent healthcare system (US Department of State, 2014),

In 1979, the founding of the Hamad Medical Corporation (HMC) was announced by the Emir (Hamad Medical Corporation | Weill Cornell Medicine - Qatar, 2017). The HMC is a charitable healthcare supplier which now provides most of the medical services in Qatar. It oversees a total of eight hospital facilities - Rumallah, Hamad General, Women's Hospital, National Center for Cancer Care and Research, Heart Hospital, Al Wakra, Al Khor, and the Fahad Jassim Kidney Specialists. Since 1979, the HMC has overseen the building a system of clinics in Doha, the capital, which incorporate both primary care and tertiary Besides the HMC. centers. Government bank (QDB Qatar) supports health care and other educational ventures by putting resources into the less affluent private sector (QDB - Main Sectors, 2017).

Healthcare planning and oversight are under the control of the Qatari government. The main governmental body was the Ministry of Public Health (*Gerard*, 1973), in which legislative innovation was par for the course. In 2005 the National Health Authority (NHA) was set up to replace the Ministry of Public Health. The NHA has regulated the major medical bodies and supplied management to various public health organizations.

In 2007, the Joint Commission International (the American-based association that regulates the accreditation of hospitals outside of the USA) granted accreditation to the HMC offices. Additionally, the HMC was the first hospital facility in the Middle East to receive institutional accreditation from the Accreditation Council of Graduate Medical Education-International (ACGME-I). ACGME brings together consistent criteria for the instruction of medical students,

preparing them for residency, placement and fellowship programs.

In 2009, the former Emir founded the Supreme Council of Health (SCH) which currently administers Qatar's healthcare services. This legislative office directs commercial medical centers and provides health solutions and other activities to promote general well-being. Medical services associations incorporate not-for-profit administrations and private sector resources.

Qatar's goal is to enhance medical services by creating better quality medical centers and medical instruction. In 1995, the Oatar Foundation for Education, Science, and Community Development was founded. Education City, launched by the Foundation in 1997, was one of its initiatives. The aim of Education City was to provide free, quality education, as well as to conduct research and to foster advancement. (Chouchane et al., 2011). The Weill Cornell Medical College in Qatar was built in 2001 and offers both premedical educational modules and a four-year medical educational program. In 2004, a contract was drawn up between the primary healthcare supplier of Qatar, Hamad Medical Corporation, and Weill Cornell so that medical graduates could get clinical training inside hospitals (Weill Cornell Medicine - Qatar, 2017).

In May 2016, a new and entirely digital scholarly medical center was opened (Sidra Medical and Research Center, 2017). The purpose of this Sidra Medical and Research Center was to synchronize with the Weill Cornell Medical College and the Hamad Medical Corporation to provide patient care and develop medical research (Sidra Medical and Research Center, 2015).

CURRENT CHALLENGES OF THE HEALTHCARE SYSTEM

Qatar must balance five major challenges:

- 1. Modernization with the preservation of traditions.
- 2. The needs of the present generation with the needs of future generations.
- 3. Managed growth with uncontrolled expansion.
- 4. The number and quality of the expatriate workforce, and its development.
- 5. Economic growth, social development and environmental management.

The nation's rapid financial development and population growth have created tensions between the country's old and new cultures. Current struggles to achieve a work-life balance, along with the dynamics of traditional relationships, cause strains in family life. It is possible, however, to make present-day lifestyles compatible with Qatar's traditions and culture. The aim of Qatar's

National Vision is to balance and adjust the old with the new.

Qatar is addressing the issues of the present day while recognizing the needs of future generations. "Reasonable advancement" is a process that looks to address the needs of the present generation without compromising the ability of future generations to address theirs. This is called "intergenerational equity."

There have been low financial returns from uneconomical hydrocarbon resources. An overheated economy could cause financial stress and deplete the natural resources irreversibly. Qatar's National Vision seeks to choose a way forward that carefully balances the interests of the present generation with those of the next.

The economy is currently expanding. If not managed carefully, this expansion could distract Qatar from its core values. Stresses and monetary imbalances from an overheated economy could manifest themselves in fast-rising costs which, if they were to continue, would result in budgetary vulnerabilities. There is the risk of a less open reduced efficiency administration, workplace, poorer quality ventures, ecological harm and increasing social disintegration. With controlled growth, however, the projections are good. Fiscal development and environmental protection are not mutually exclusive goals. Development plans can affect the natural ecology negatively, but they do not have to. Ecological degradation can be reduced through investment in advanced technologies designed to limit the damage caused by commercial activities. It is hard to avoid hurting the earth altogether. New patterns of development normally depend on oil, gas, petrochemicals and substantial business growth. When planning and implementing its industrial projects, however, Qatar has committed itself to upholding worldwide benchmarks environmental protection. Wherever there is an environmental cost to be paid for economic progress, it must be mitigated by innovations that help to enhance the environment (National Health Strategy, 2015).

A COMPARISON OF PRIVATE AND PUBLIC HEALTHCARE IN QATAR

(a) Government-run Healthcare and the Health

The Hamad Medical Corporation (HMC) is the government-run healthcare supplier in Qatar. It is responsible for five hospitals and twenty-four primary healthcare centers or group clinics (PHCC, 2017). Healthcare services are available to the natives and inhabitants of Qatar at a greatly discounted rate at HMC hospitals and clinics, but these low-cost services can be obtained only by

using the Health Card provided by the government. Other people who live in Qatar and have valid visas are eligible to apply for a Health Card from the Health Card Office, from any HMC Clinic, or from the Rumailah Hospital.

(b) Private Healthcare

While government-sponsored health services in Qatar are good and moderately priced, there are also various private healthcare providers. These are conform to the national standards set by the Ministry of Public Health, but they do not accept the Health Card. Fortunately, this situation will soon be changed.

Qatar is moving ahead with a national health insurance scheme. At this stage it covers nationals only, but eventually it will extend to expatriates as well. Under the plan, it would be obligatory for managers to provide medical coverage to all employees. Right now, this is optional (Pallot, 2014; National Health Strategy, 2015).

For those who actually prefer private medical care, private insurance is an absolute must. Private hospitals and clinics in Qatar are expensive, and costs can be prohibitive without medical coverage. In Qatar there are various local and worldwide medical insurance suppliers which provide thorough health coverage according to one's needs (Life in Qatar, 2015).

A COMPARISON OF TOTAL INPATIENT ADMISSIONS

According to data collected from providers, the total number of inpatients in 2011 was 85,555. As explained in Figure 1, data collected from the diverse stakeholders show that HMC was the highest provider of inpatient services in Qatar in 2011 (Qatar Healthcare Facility, 2013). It provided about 75 percent (63,984) of the entire medical care reported in that year. Sixteen percent of inpatients observed at HMC were SML expatriates (Single Male Laborers.) Predictably, about 61 percent were non-SML expatriates, and 23 percent were nationals. For the purpose of this study, it was assumed that all SML expatriates received inpatient care through HMC, although some SML expatriates probably chose to go to private hospitals as well.

Al Ahli was the second major provider, accounting for 14 percent of the activity reported in 2011 (Qatar Health care Facility, 2013). The Al Emadi Hospital and Doha Clinic Hospital handled 5 percent of the activity in 2011. Aspetar, which specializes in sports medicine and orthopedics, reported 1 percent of the activity.

MAJOR MEDICAL EQUIPMENT (MME) BY SITE

By analyzing and studying the data collected for the present state review, and data from Sidra Medical and Research Center, major medical equipment by site is summarized in Table 1. We can see that most major medical equipment is within the HMC. Until March 2013, there were no gamma cameras reported within Qatar (Qatar Health care Facility, 2013).

HOSPITAL FACILITIES

Inpatient services are provided by thirteen hospitals: Al Ahli Hospital, the American Hospital, Doha Clinic Hospital, Al Emadi Hospital, Aspetar and the HMC hospitals: Hamad General Hospital (HGH), Rumailah Hospital, Women's Hospital, Al Wakra Hospital, Heart Hospital, Al Khor Hospital, the National Center for Cancer Care and Research (NCCCR) and the Cuban Hospital. (Qatar Healthcare Facility, 2013).

Outpatient services are provided through the Primary Health Care Corporation (PHCC) centers, Ministry of Interior (MoI) health centers, Qatar Petroleum (QP) health centers, and the Supreme Council of Health (SCH) primary health care centers run by the Qatar Red Crescent Society (QRCS). There are also a variety of other private health centers and clinics.

Beds in every hospital facility were collated by type, according to the classification system developed for the Qatar Healthcare Facilities Master Plan (QHFMP). Table 2 gives the latest number of accessible beds in every hospital, by bed type. (Qatar Healthcare Facility, 2013).

FUTURE STATE ANALYSIS RESULTS

By taking into consideration a predicted total population of 2.54 million in 2018 and 2.51 million in 2033, the analysis yielded the following results as presented in Table 3.

CONCLUSION

To evaluate the success of a healthcare initiative, we use various forms of interconnected and complex data. One approach is to use several domains to take a holistic look into the issue (Hollander et al., 2010). We use this method to assess the design, implementation, and functionality of any healthcare model. Some of these domains show accessibility, the impact on health, sustenance, quality, cost effectiveness, and transferability.

In comparison to other countries which have high revenues from health care systems that have been developed over decades and centuries, Qatar has seen tremendous growth and development in less than fifty years (Prendville, 2007). Healthcare systems from various nations of the world have been adopted and introduced and Qatar is making a great effort to integrate these imported systems in a manner that will suit its native lifestyle and the lifestyles of multicultural people from other countries. Over the past twenty years, Qatar has experienced significant growth in terms of medical facilities and infrastructure, as well as an increase in the volume of academic research.

The regulation and management of improved healthcare had been solely the responsibility of the Qatari government. Now Qatar is adopting an American system of healthcare insurance, in contrast to the old government system (Pallot, 2014; National Health Strategy, 2015),

Statistics on patient demographics and their diagnoses are now being recorded in Qatar (Gerard, 1973). In the near future, there will be an appraisal of outcomes. One could easily liken Qatar to a greenhouse garden that is being properly cared for and receiving intense attention. Over the next ten years, architects of health policies in other countries will be able to take a cue from the outcomes, obstacles, successes and health costs of Qatar.

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ANNEXES

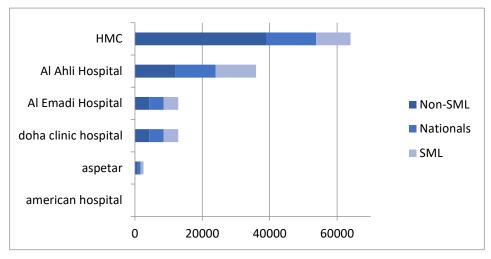


Figure 1: Providers of Inpatient Services In Qatar for 2011.

Source: Qatar Healthcare Facilities Master Plan 2013-2033 [PDF] accessed at https://d28d0ipak1ih43.cloudfront.net/app/media/1018

Table 1Major Medical Equipment by Site in Qatar

Facility name	CT	Cyclotron	Dialysis	IR/CL	Litho	MAMMO	MRI	RAD/RF	Linac	PET
Al Ahli Hospital	2			1		1	1	1		
Al Emadi Hospital	2				1	1	1	3		
Future Medical Center	1					1	1	2		
Al Wakra Hospital	1		14			1	1	9		
American Hospital						1		1		
Aspetar Hospital	1						2	4		
Clinics & Polyclinics							6	13		
Cuban Hospital	1					1	1	3		
Al Khor Hospital	1		27		2		1	3		
Hamad General Hospital	3		130	2	4	2	6	11		
Heart Hospital	1		6	5				2		
National Center for Cancer Care and Research		1				1	1	1	2	1
Rumailah Hospital	1						2	1		
Sidra Medical & Research Center	3		16	5		1	3	9		1
Total	14	1	193	13	7	10	26	63	2	2

Source: Qatar Healthcare Facilties Master Plan 2013-2033 [PDF] accessed at https://d28d0ipak1ih43.cloudfront.net/app/media/1018

Table 2

Number of Accessible Beds in Qatar Hospitals Providers General Medical/Surgic al Total Physical Medicine and Rehabilitation Beds Psychiatric/ Behavioral Obstetrics and Gynecology Beds Skilled nursing and Geriatric Beds NICU/PICU Beds Pediatric Beds Health Beds ICU Beds Hamad General Hospital Rumailah Hospital Skilled Nursing Facility Women's Hospital Al Wakra Hospital Heart Hospital Al Khor Hospital National Center for Cancer Care & Research Cuban Hospital Al Ahli Hospital (AAH)* Al Emadi Hospital (AEH) American Hospital Aspetar** Doha Clinic Hospital (DCH) Total

Source: Qatar Healthcare Facilties Master Plan 2013-2033 [PDF] accessed at https://d28d0ipak1ih43.cloudfront.net/app/media/1018

^{*} Table 2 lists the number of designated beds (250) but the number of accessible beds (180) was used in the Gap

^{**} Table 2 lists the number of designated beds (50) but the number of accessible beds (25) was used in the Gap analysis.

Table 3Predicted Population of Patients in Qatar Hospitals by 2023

	Services	Demand Projections	Required Capacity	Available Supply	Gap*
8	Inpatient	402,719 IP admissions	5,686 beds	4,714 beds	1,452 beds
2033	Outpatient	38,327,715 OP visits	5,038 rooms	2,528 rooms	2,510 rooms

^{*}The Gap was calculated using an estimated number of operational beds

Source: Qatar Healthcare Facilties Master Plan 2013-2033 [PDF] accessed at https://d28d0ipak1ih43.cloudfront.net/app/media/1018