

# Determinants of Success And Challenges In Healthcare System: The Case of Abu-Dhabi

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## Research Article

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### ABSTRACT

A greater attention to comparative research of international health systems occurred in the early 1990s due to arguments over the American healthcare reforms aside from increased global cooperation. Healthcare systems in both developed and developing countries have been challenged and, in some cases, have struggled to meet the demands of residents.

This paper engages the key factors that contribute to healthcare systems including demographic, social and economic features. Moreover, it discusses a crucial current health system issue that surrounds health professionals. The paper examines the Abu-Dhabi healthcare system and engages with other systems in relation to efficiency and outcomes. The analysis in this paper reveals concerns regarding issues related to access and utilization of health services, service delivery methods, financing the system and the health workforce. More sophisticated reforms need to be implemented to get improvements comparable to international standards.

## INTRODUCTION

When understanding the historical background of health systems, political factors, geographic considerations, cultural patterns and beliefs are key. Other elements which must be considered include human resources, public health measures and financing <sup>[1]</sup>. This entails the understanding of the different policies, processes and arrangements as well as a thorough grasp of the sophisticated statistical procedures and the comparative frameworks, theories and methods <sup>[2,3,4,5]</sup>. The information for the comparison needs to be accurate, detailed and current. Getting the required data is difficult because health systems all over the world are complex and are functioning in an atmosphere of inconsistency which inevitably makes the comparison further tangled. At the same time, different data collection and interpretation methodologies might hinder the matter as well <sup>[1]</sup>. However, the remunerations of the cross-national studies probably balance the challenges.

Drawing on the work of Johnson and Stoskopf, health systems are composed of employees, finance, information, equipping, transport, interconnections, regulations, and management <sup>[6]</sup>. These components are integrated together to provide a service that is efficient, satisfactory, high quality, fairly delivered and affordable. According to Anderson and Frenk, health systems entail a large framework that functionally and structurally operate in a way to sustain health services to patients <sup>[3,7]</sup>. Such framework involves collection of constituents comparably identical to what has been mentioned by Johnson and Stoskopf <sup>[6]</sup>. The aforementioned is collectively summarized in the WHO (World Health Organization) definition of health system as following: "The sum total of all the organizations, institutions, and resources whose primary purpose is to improve health" <sup>[6]</sup>.

However, there are variations between countries in what constitutes this framework depending on certain mannerisms on how the health service is paid (and who will pay), how it is configured, planned and regulated, and how citizens gain access to that service in each country <sup>[1]</sup>. These differences are a reflection of the discrepancy in opportunities and challenges in healthcare, and the way they are tackled creates variation in levels of health outcomes.

This paper falls in line with calls regarding determinants of success factors for healthcare systems. A thorough examination of Abu-Dhabi health system constituents and analysis of health determinants such as society, economy and demography have highlighted how they influence and challenge the health system. Additionally, a highlight of important health professionals' issues has been discussed. A brief discussion was intended to propose suggestions and recommendations to contribute to the success

of the health system.

## METHODOLOGY

The methodology applied is a critical review of the relevant literature in leadership and healthcare management. The literature search focused on the use of secondary literature. The first step was to define the search parameters and conduct a thorough review on literature that was relevant to the subject. The publications found were too broad. To help to define the subject matter and refine the search, keywords were generated. This relevance tree led to the research of two main concepts-leadership and service quality-which were further refined to other associated research terms like, corporate governance, private systems, finance, and strategic policy, etc.

To ensure that the searches were objective and consistent, the terms were catalogued relatively to their eligibility to the research questions based on a predetermined set of criteria. The criteria applied to the research included the date of publication, paper relevance and reference in other publications, bias and methodological omissions.

The second search with the applied criteria was refined in the secondary literature that addressed directly the topic in question. Initially, the search parameters were defined broadly as literature on national and healthcare systems. These concepts were used to search abstracts. ProQuest searches of academic journals generated articles as follows – Abu Dhabi (312) and healthcare systems (15,661). To refine the search, keywords and concepts were searched together. When these three concepts were searched together only seven abstracts were generated. The relevant papers will be discussed in three main themes; background to Abu-Dhabi health system, how demography, economy and society determine the demand for healthcare as well as resources and utilization of services, and health professionals challenges.

The limitation of this paper is the lack of primary data collected to determine the hypothesis posed. The validity of this paper is limited to a purely theoretical approach that needs to be further investigated with primary data collection. However, the search was through reputation journals, the authors' credentials were evident and all publications go through peer review.

### Background - Abu-Dhabi Health System Analysis:

Whether there is convergence in health systems or not, the Abu-Dhabi health system (Figure 1) as any other system, has the six 'building blocks' or what has been described by Johnson and Stoskopf as "critical success factors" (Figure 2) [6]. On considering these building blocks, the following is a brief account of Abu-Dhabi health system.

Figure 1. Abu-Dhabi Health System Highlights.

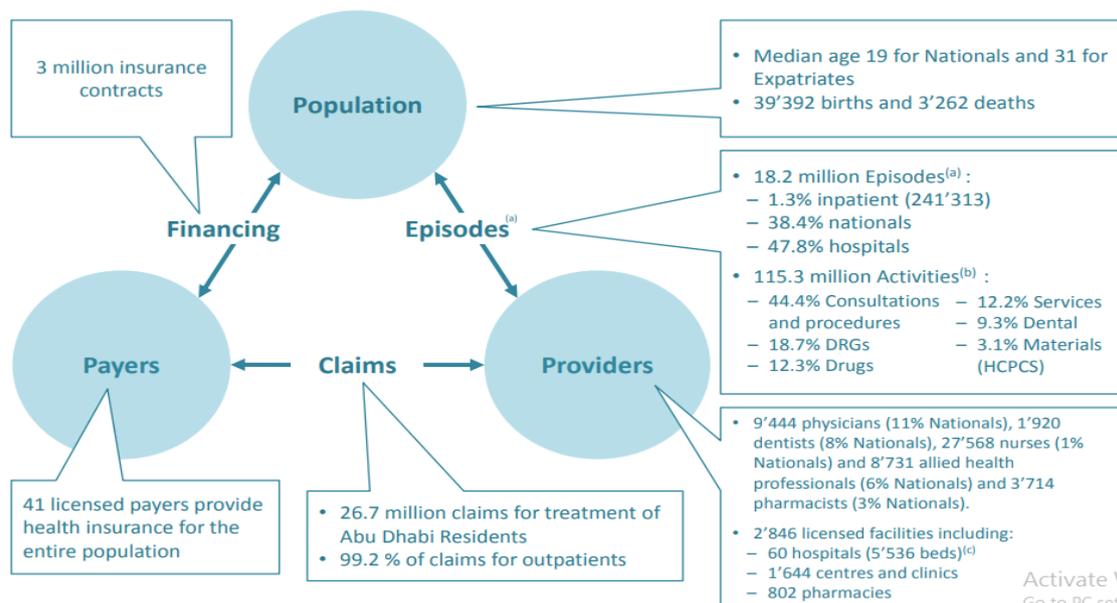


Figure 2. Building blocks of health systems.



The Abu-Dhabi health system reflects three basic principles “better access to services, continually improving quality of care and sustainability of resources” identified by DOH (DoH is Department of Health, the regulatory body of healthcare sector in the Emirate of Abu-Dhabi previously known as HAAD) in order to execute its regulatory mission [8]. Within this system, both public (governmental) and private facilities provide medical care and patients can freely choose their provider. The notion of a mixed public-private health system started early in the 1960s when Lees debated that healthcare services are no different from other goods in the market [9]. Perhaps the most notable reflection of a more private system is in the US which supports competition and promotes incentives for efficient performance [10]. On the other extreme, stands the sturdy NHS (NHS is the National Health Service, the publicly funded healthcare system of the United Kingdom) system of the UK with proponents emphasizing failure of generalizations from other industries [11].

Other examples are Sweden and Denmark, where governments hold themselves accountable for the responsibility of healthcare [12]. What differentiates the British NHS from other health systems in Europe is its frugality [1]. The reforms that took place in the early 1990s in order to increase competition and productivity have created a more bureaucratic “Internal Market” [1]. A number of these changes were applied in the Swedish model predominantly in primary care practice.

Supposedly, the most critical variable in cross-national healthcare is the role of governments [13]. Despite bringing in private providers, there is dominance of Abu-Dhabi’s public sector in overall provision of care, where the governmental owned SEHA (SEHA is Abu-Dhabi Health Services Company owned by government) hospitals’ share in all inpatient episodes was 50% and 28% of outpatient ones [14].

Since independence in 1971, the United Arab Emirates (UAE), and precisely the Emirate of Abu-Dhabi, has witnessed massive progress in the healthcare sector in terms of availability and quality of service [15] (Figure 3). In 1974, the number of government hospitals in the Emirate of Abu-Dhabi was six, distributed between the three regions that constitute the emirate [16]. Unsurprisingly, with this tremendous growth, the number has increased to 14 hospitals in 2018 [14]. However, over the past two decades, there was obvious shift in health investment from government to private sector.

**Figure 3.** Abu Dhabi’s health facilities.



Facilities	Growth rate (CAGR 2010 - 17) <sup>(b)</sup>								
	2017	2016	2015	2014	2013	2012	2011	2010	CAGR
Hospital	60	56	52	45	41	39	35	33	9
Centres (various)	944	875	757	629	587	540	494	429	12
Clinic	700	449	423	362	335	316	265	239	17
Pharmacy	802	750	637	557	502	454	427	408	10
Store	75	79	76	72	72	69	67	60	3



**NOTE:** CAGR is the compound annual growth rate which is the mean annual growth rate of an investment over specified time

period that is more than one year.

This devolvement was evident in the way that government has embraced efficient policies to engage private investors and has not established any new hospital since 2011<sup>[17]</sup>. While DOH calls to move the cost burden away from the public sector, the priority is to ensure consistency in service delivery and improve quality to ensure that privatization will not result in variable levels of quality (The Economist Intelligence Unit)<sup>[18]</sup>. Management outsourcing and accreditation to global quality standards such as JCI (JCI is the Joint Commission International) have brought international best practices to Abu-Dhabi. Both act as inducement steps to increase the local population's faith in home services holding them from seeking treatment abroad. Examples of these management contracts include C level and Clinic Abu-Dhabi, Johns Hopkins, Children's National Medical Center and GE Healthcare to name but a few<sup>[19]</sup>.

In spite of the fact that health infrastructure in Abu-Dhabi is at a comparatively developed level and private facilities handle the majority of non-critical cases, yet, progress has been uneven and there are huge capacity gaps that exist especially in intensive care and both adult and pediatric subspecialties<sup>[16]</sup>. Nevertheless, HAAD has pursued a capacity master plan that produced some improvements in terms of the number of hospital beds available to the population and the number of specialist physicians<sup>[20]</sup>. The rigid boundaries between services and being highly specialized to the extent that patients need multiple transfers across providers create another gap in the coordination and integration of services between the different areas of specialties. For instance, the Nordic countries leapfrogged integrated continuum of care and have developed several models and processes to overcome any gaps in coordination<sup>[12]</sup>.

Regulation of healthcare systems is complex and multifaceted, involving combination of strategic policies, monitoring, ensuring accountability and system structure<sup>[21]</sup>. At the same time, public consent should be maintained and thus complicates the issue in turn<sup>[1]</sup>. Leadership and governance are impacted by all levels; federal, state and local<sup>[22]</sup>. However, trends in the UAE are towards fragmented stewardship<sup>[18]</sup>. This took place first with the formation of the General Authority for Health Services in Abu-Dhabi in 2001 followed by its division in 2007 into the DOH in charge of governance and control of both public and private sectors and the SEHA accountable for public health service provision<sup>[18]</sup>.

Regulatory fragmentation imposes pros and cons for the market. On the one hand, this appeal will grant that each Emirate implements standards and legislations that fit their own unique needs. On the other hand, it entails challenges to investors looking for ownership of pan-Emirates facilities, where they must operate under varying schemes and rules of licensing, purchasing etc.

When it comes to health system financing and insurance, most of the literary texts describe Sweden and the US to be at the opposite sides of the pole. Arguably, the Swedish welfare model, including healthcare and social services, is one of the most comprehensive and universal in the world<sup>[23]</sup>. Probably, Starr among many other authors has explored the history of US health financing and attributed its negligence of national health insurance to many social interventions<sup>[24-26]</sup>. Financing in Abu-Dhabi is predominantly public with multiple private payers<sup>[16]</sup>. Although Abu-Dhabi health system has a mixed finance, the national government strongly regulates insurance schemes, price lists and reimbursements through the DOH.

Health services to locals are fully covered by the government and to expatriates is almost through a system of workplace-based insurance, like that in Germany, Japan and France<sup>[1,16]</sup>. Non-locals make co-payments for in-patient stay, out-patient consultations and pharmacy ranging from 20% to 30% of service fees depending on their insurance plan<sup>[16]</sup>. In whatever way, this coverage system results in inequalities, for instance; many of the low-income workers fail to seek treatment due to these co-payments. Such a system is described as "conservative" or "corporatist" by Esping-Andersen<sup>[27]</sup>.

In 2006, Abu-Dhabi mandated health insurance as a prerequisite for residency permits in order to ensure all residents have access to health services<sup>[16]</sup>. Surprisingly, the proportion of population insured by the government tends to carry less discrepancy internationally. The Organization for Economic Co-operation and Development (OECD) surveillance in 1998 has found that in 24 out of 29 countries surveyed, governments guaranteed 99-100% coverage. Exceptions were the US with 33% coverage, Turkey with 66% coverage, Mexico and the Netherlands with 72% coverage, and Germany with 92% coverage<sup>[28,29]</sup>.

The insurance scheme is bound to the strength of health service delivery<sup>[18]</sup>. Ideally, it ensures equitable access to health services, whereas both high and low income insured patients have identical access to service and receive the same quality of care. Consequently, the utilization rate will increase. Over and above, the information and data created by the insurance claim system aids in improving quality, identification of inaccuracy and recognition of any capacity gap.

#### **Demography, Economy and the Society as Health Determinants and Its Challenges:**

Currently, the Abu-Dhabi health system is functioning under momentous pressure due to rapid changes in economy, demography, and society<sup>[30]</sup>. The total population grows at an annual rate of 5.6% (between 2010 till midyear 2016) which is among the top population growth rates worldwide<sup>[31]</sup>. Data collected from SCAD (Statistic Center Abu Dhabi.) shows that only 19% of Abu-Dhabi residents are nationals. The inflow and outflow of expatriates (the big proportion) are high due to limited employment contract periods<sup>[18]</sup>. Collectively, these facts are attributed to the unique, rapidly growing, and inconsistent demographic structure (**Figure 4**).

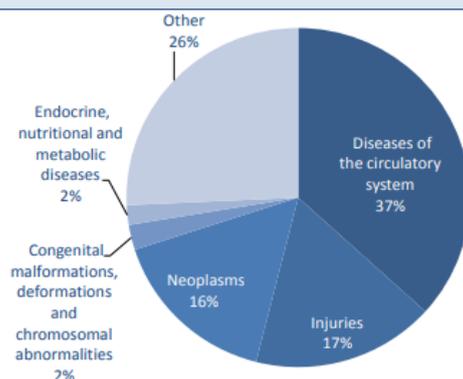
**Figure 4.** Average annual population growth rate mid-year 2010 to 2016.

Citizenship and Gender	Mid-year 2010	Mid-year 2016	Average annual growth rates
<b>Grand Total</b>	<b>2,094,480</b>	<b>2,908,173</b>	<b>5.6</b>
Males	1,460,794	1,857,618	4.1
Females	633,686	1,050,555	8.8
<b>Citizens</b>	<b>437,483</b>	<b>551,535</b>	<b>3.9</b>
Males	224,498	282,632	3.9
Females	212,985	268,903	4.0
<b>Non-Citizens</b>	<b>1,656,997</b>	<b>2,356,638</b>	<b>6.0</b>
Males	1,236,296	1,574,986	4.1
Females	420,701	781,652	10.9

Furthermore, Abu-Dhabi is experiencing the same demographic shift faced by a majority of industrialized countries with people living longer, perhaps due to the greater extent of health promotion, disease prevention efforts and the advance in technological innovation witnessed in healthcare ultimately increasing life expectancy and reducing mortality rates [14,30,32]. Unsurprisingly, causes of death resemble that in developed countries with cardio-vascular diseases being the leading cause of mortality [14,33-35] (Figure 5). The dimensions of this demographic shift are due to the rising costs to keep this population, that is anticipated to have more comorbidities and chronic diseases related to an unhealthy lifestyle, not just alive but give them an acceptable quality of life. Therefore, more demand in terms of funding, personnel skills and technology is created.

**Figure 5.** Mortality rates by cause in Abu-Dhabi from 2001-2017.

Causes	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
<b>Total</b>	<b>3'262</b>	<b>3'283</b>	<b>3'163</b>	<b>3'153</b>	<b>3'015</b>	<b>2'923</b>	<b>2'902</b>	<b>2'879</b>	<b>2'988</b>	<b>2'949</b>	<b>2'742</b>	<b>2'450</b>	<b>2'446</b>	<b>2'489</b>	<b>2'492</b>	<b>2'617</b>	<b>2'574</b>
Diseases of the circulatory system	1'198	1'219	1'105	1'107	1'107	1'135	1'089	762	707	697	506	378	424	413	624	778	622
Injuries	473	554	542	467	485	451	481	202	632	464	621	503	565	563	574	614	600
Neoplasms	497	421	427	406	389	406	403	448	390	350	370	315	294	298	276	289	252
Other (benign, in situ, neoplasms of uncertain or unknown behaviour)	27	79	73	81	79	68	58	13	7	10							
Congenital malformations, deformations and chromosomal abnormalities	78	89	97	117	62	85	72	144	199	120	177	131	156	146	152	199	190
Endocrine, nutritional and metabolic diseases	63	70	83	78	73	63	98	194	210	79	201	130	133	126	103	73	65
Other	837	752	704	777	715	634	601	731	786	1'144	867	993	874	943	763	664	845



Worldwide, the level of awareness and knowledge of diseases, interventions and legal rights are rising. As a result of this and the aforementioned demographic shift, the consumer (whether patient, relatives or public) needs and expectations have changed [32]. Consumers expect more from health services and they want to be involved in their management plans [32].

Another dimension of this demographic change is where patient(s) will receive the treatment/care and who will provide it. The approach on whether it should be institutional or community-based services is ongoing, with non-acute care of chronic diseases varying among countries. Directions in many western countries nowadays lean towards patient centered care with services delivered at a community level [1,36]. Over the 1990s, Germany and Japan have implemented unique strategies through informal family care, giving arrangements to support and ensure continuity of care [4,37,38].

The UAE has the 3<sup>rd</sup> fastest growing economy in the gulf region and from the total GDP (GDP is the Gross Domestic Product.) of the UAE, Abu Dhabi has contributed around 60% in 2012 (Figure 6) [39,40]. Since the mainstay to economy is the hydrocarbons, which account to 32% of the total GDP, the economic stability is greatly affected by oil price volatility [31,40,41].

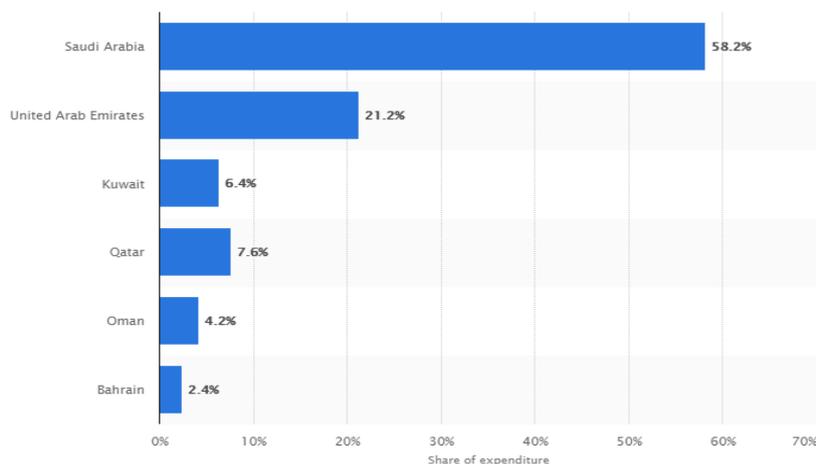
**Figure 6.** UAE real GDP growth and comparison to GCC countries.

GCC - Real GDP Growth Forecasts (%)		
	2018	2019
Oman	1.9	5
Kuwait	2.3	4.1
UAE	2.9	3.7
Qatar	2.7	2.8
Bahrain	3.2	2.6
Saudi Arabia	2.2	2.4

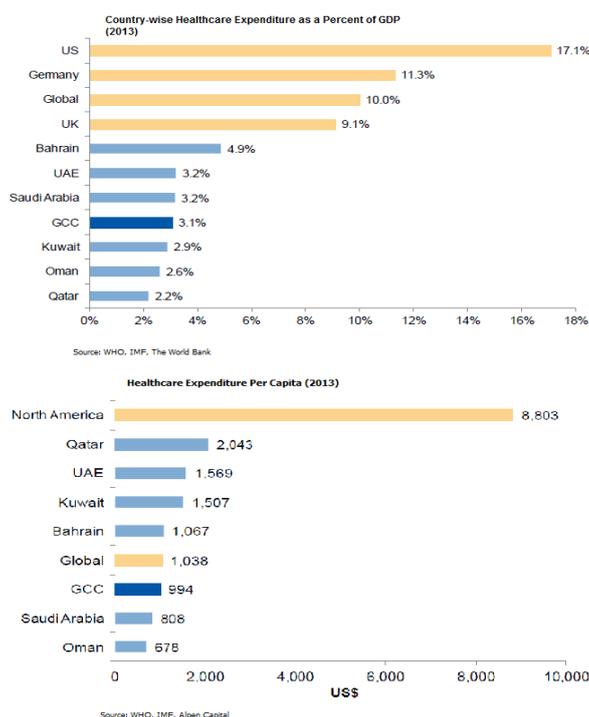
The economic impact in the health sector is very controversial. Whereas in other industries, technology and market competition have caused high productivity and cost reduction, the cost in healthcare keeps rising<sup>[32]</sup>. Logical reasoning might perceive that a nation's health status and life expectancy are linked to country expenses on healthcare. However, Japan for instance, has considerably less spending in healthcare compared to the US, Canada, Germany, and France but has the lowest infant mortality rate and the greatest longevity worldwide<sup>[28]</sup>.

Health spending in the UAE accounts for 21.2% of overall GCC (GCC is the Gulf Cooperation Council Countries) expenditure in 2017 (**Figure 7**)<sup>[42]</sup>. Though health expenditure as a percentage of the GDP is very low compared to developed countries yet, per capita, health expenditure is within the global average (**Figure 8**), ostensibly due to global affluenza and the prevalence of lifestyle-related diseases<sup>[42]</sup>. The UAE healthcare is predominantly dependent on the government for financing healthcare expenditure. With rising healthcare costs, it is imperative for the government to increase private participation.

**Figure 7.** GCC Health Expenditure (2017).

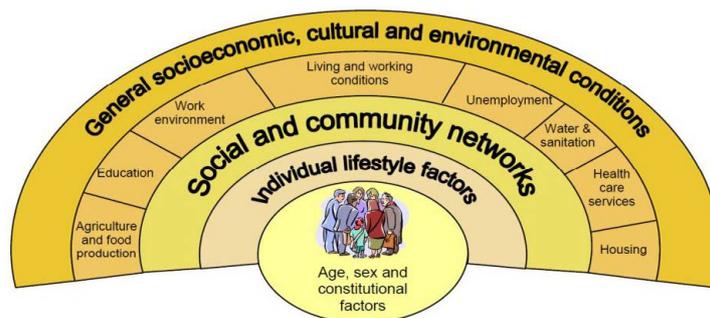


**Figure 8.** Country-wise Health Expenditure (2013).



Rather than considering health as an output of economic growth, population health is shaped by many other factors [43,44]. The Cuban experience after the withdrawal of the Soviet Union asks questions about the effect of social and other forces on healthcare and doubt the predictability of the economy alone [44]. Numerous models of health were developed to understand and examine factors that contribute to health. In 1991, Dahlgren and Whitehead talked about layers that impact health (**Figure 9**) [45]. The model describes the relationship between individuals, community, environment, culture, socioeconomic factors, and diseases. Although everyone has a certain set of genes, lifestyle, e.g. a choice to take drugs and smoke, this is influenced by the custom and norms within the community, friendship and so on. Additionally, structural factors such as housing, unemployment, and education all actively affect health. Poor housing and sanitary systems for example, can expose people to unhealthy agents like pollens or facilitate transmission of communicable diseases. Similarly, Wilkinson and Marmot suggested that working conditions and unemployment result in low self-esteem and causes ill health [46].

**Figure 9.** Dahlgren and Whitehead Model of Health (1991).



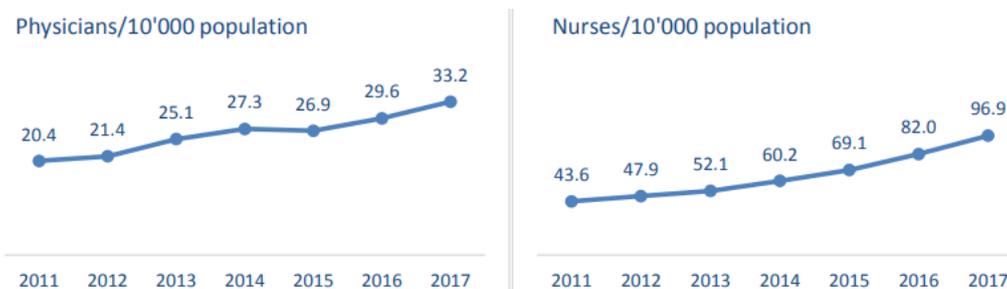
Not with standing, these socio-ecological determinants can create health disparities [47]. Health inequities are very evident in Latin America and other developing nations [48]. Lassey and his colleagues argue that basic infrastructure is there but, it is the political contingencies and socio-economic divergence that forms obstacles to health systems in Latin America [48]. Even more in Africa, resources are not enough to cover the massive needs and when they do exist there is misdistribution of these resources (whether medical practitioners or other resources) between cities and rural areas [49]. These circumstances are the true challenges for comparative health systems and clarity for international collaboration to address them. According to Loney and his colleagues, the diversity of UAE society in terms of religious affiliations, educational attainment and cultural practices poses huge pressure on government and health authorities, both in formulating strategies for healthcare and promoting public health [50].

### Attention to Health Workforce

Human resources are the definitive and ultimate resources for any system, particularly health systems [51,52]. Navarro and Shi argued that higher worker density and levels of quality are the determinants of nations' health status and survival [53]. El-Jardali and his colleagues have reinforced this point when they concluded that higher numbers of physicians and nurses are associated with lower mortality rates and higher life span [54].

One of the key comparative indicators internationally is the number of physicians and nurses per unit of population which carries significant variations. During the last 5 years in Abu-Dhabi, the number of physicians per 10,000 population has increased from 21.4 to 33.2 (55.1.3%) and that of nurses has increased from 47.9 to 96.9 (101%) [14] (**Figure 10**). Further, work division and practice arrangements between generalist and specialist physicians are an additional, much worthy, point of the comparison. Whereas the United States is regarded as a unique example where primary care physicians appointed to ambulatory services have the privilege to admit patients to hospitals and treat them there [55].

**Figure 10.** Number of physicians and nurses per 10'000 population in Abu-Dhabi.



Unsurprisingly, health workforce challenges differ enormously between and within countries [30]. Within the Abu-Dhabi health system, human resources are subjected to the 8 following challenges [18,30,56-60] (Eastern Mediterranean Regional Office of the WHO): Workforce shortages; reliance on expatriates; skill gap and skill-mix imbalance; high turn-over and out-migration; geographical misdistribution; limited educational and training opportunities; lack of reliable database and an exhausting work environment.

However, staff improvements, in terms of number and skills, ranks high as a priority in Abu-Dhabi and yet there is a remarkable growth in the number of health workers [18]. Despite this, DOH projections estimated that about 3,465 additional physicians

and 11,979 nurses will be required by 2025 <sup>[14]</sup>. Conspicuously, the shortage of health work force is related to several factors. Statistics point to lack of national/native workforce with expatriates representing the majority in healthcare <sup>[59,61]</sup>. This suggests attractiveness of the region in terms of stability, services and live ability but raises the attention on whether differences on cultural, social backgrounds and language barriers will affect delivery and quality of care <sup>[18,62]</sup>.

Moreover, globalization has caused health workforce to pursue remuneration and professional development chances in countries where there are higher demands and many opportunities <sup>[63]</sup>. High workers' influx compounded with low retention adds a significant burden in both managing them and the continuity of care promoted by these workers. Many physicians tend to migrate to US, UK, Canada, and elsewhere for acquisition of international levels of education and skills in order to complete their specialty and then either choose to settle there or spend more time to come back to the UAE <sup>[64]</sup>.

Furthermore, expatriates find working environments unfavorable with high attrition, tedious and lengthy licensing processes and disadvantageous residency, immigration and pensions policies <sup>[30,59,60]</sup>. Perhaps offering medical workers financial and non-financial incentives may motivate them to stay longer thus improving retention <sup>[18,64]</sup>. Younies found that pecuniary rewards are the most motivating remuneration for UAE physicians followed by training and education <sup>[65]</sup>. Considering this, retention strategies should include offering better salaries/compensations pattern, for example shifting physicians' payment from fixed salary to capitation as in Sweden, and systematic educational and training programs <sup>[66]</sup>.

When approaching the problem of shortages, an attention to geographical distribution and balanced skill-mix should be a priority <sup>[30]</sup>. Clustering of physicians and nurses in Abu-Dhabi city, the smallest city of the 3 regions that constitute the Emirate, is a misdistribution as suggested by Anyangwe and Mtonga that results in serious health inequities <sup>[67]</sup>. Mechanisms to attract and retain medical workers in rural areas would involve considerably high cost, chiefly to address better salary packages and funding the development of the infrastructure of these areas <sup>[18,65,68]</sup>.

In most Arab countries, health workers and human resource management have low significance in health policy agenda <sup>[69]</sup>. Consequently, and in addition to financial limitations, work environment has worsened, training and development has lagged behind and workforce planning failed to fulfill the demands of medical personnel as well as populations and health systems <sup>[40,60]</sup>. Scarceness of quality assurance and ongoing monitoring programs gives little data at hand to address these issues <sup>[34,70]</sup>. Workforce figures are weak and have ignored key characteristics such as: geographical distribution, gender, type of skills, etc. <sup>[34,59,71-73]</sup>.

In summary, tackling challenges to human resources in healthcare requires consideration to personnel development, supply-demand patterns, and mobility <sup>[30]</sup>.

## DISCUSSION

The Abu-Dhabi health system is subjected to challenges which are almost identical to that faced by developed countries <sup>[32,68]</sup>. Ageing population and prevalence of chronic disease place huge issues on the health system. Technological innovations in medical and surgical interventions result in more effective but also expensive treatment options, and inevitably, rising expectations. Based on the previous detailed examination of the Abu-Dhabi health system, the SWOT analysis illustrated in **Figure 10**, poses a major question as to whether such a system can be effective.

DOH has ambitious strategies to improve healthcare services and in order to achieve them several considerations need to be recognized. It is crucial to identify health challenges facing the system and hindering its development. This cannot take place without harnessing data at the current time to pinpoint problems and issues, monitor and then find solutions and improvements <sup>[18]</sup>. Likewise, an evidence-based practice should be encouraged along with scientific research, studies and public surveillances <sup>[44,68]</sup>. Turning to facilities and private investment, a 100% ownership style through a "free zone" with zero taxes such as Dubai Health City should be utilized <sup>[18]</sup>. Perhaps the major fear of such an open participation is the inability to guarantee investor's expertise in healthcare which could be reflected in the quality of service. Moreover, DOH with other health authorities in other emirates and the National Health Council must initiate plans to harmonize licensing and registration of facilities and professionals to permit pan-UAE healthcare providers and allow staff relocation between the emirates <sup>[18]</sup>. Finally, to address health workforce the WHO suggested three fundamental aspects in order for human resources strategies to be effective which include improving recruitment, supporting current staff to perform better, and retention plans to slowdown turnover <sup>[74-76]</sup>. Approaches like working condition refinement, staff motivation and medical education and training can help to ease issues of out-migration, high turnover, and rarity of local health workforce <sup>[30]</sup>.

In light of this discussion, the turbulent social, political, economic context within which health systems operate implies that leaders, managers, decision and policy makers will struggle to balance the needs of a horde of stakeholders as well as the public <sup>[32]</sup>. The analysis of other systems confers a thorough assessment of the strengths and weaknesses of one's own system and provides recommendations and solutions from the experience of others <sup>[1,44]</sup>. However, before recommending any component(s) from other systems, a comprehensive assessment of differences in historical, social, cultural, and political contexts between the home and host country along with the receptivity level of the host nation would be required.

## CONCLUSION

Many lessons are to be learned from comparative health system studies. This paper is an attempt to analyze and contrast Abu-

Dhabi health system to other international systems to explore weaknesses and strengths, find solutions which work best for these matters in this community. As the UAE population is expected to continue to grow over the next decade, the Abu Dhabi emirate and the UAE will need to be prepared for this change with the subsequent increase in the rates of chronic diseases in the adult population.

Advance planning of service delivery and preparation of human resources is required to face these challenges. This will require an increased focus on the ratio, specialty, distribution, exhausting work environment and other health workforce challenges through different measures like improving professionals' mobility between the emirates, retention plans, staff motivation, skill mix and medical education and training etc.

Strategies to find new ways of service delivery such as patient centered services to bring high-quality chronic care are needed. Not to forget, improving access and utilization of services through universal insurance coverage and equitable insurance plans. With the increase in health expenditure attention to economic diversification is a necessity. The system should rely on financing sources other than the government through strategies that encourage private investors like facilitating licensing processes and promoting private specialized centers. Finally, a greater emphasis needs to be placed on scientific research, studies and public surveillances. While implementing all these reforms, an imperative attention to service quality and safety levels is required as not to bevel away. These genuine reforms entail efforts and collaboration between the different authorities/ministries of the country.

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