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Flourishing in Unpredictable times: Building an Agile Healthcare Sector in the UAE





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Immanuel Azaad Moonesar

Associate Professor, Mohammed Bin Rashid School of Government, Dubai, UAE.

Mona El-Sholkamy

Assistant Professor, Mohammed Bin Rashid School of Government, Dubai, UAE.

Lama Zakzak

Associate Researcher, Mohammed Bin Rashid School of Government, Dubai, UAE.

The views expressed in this report are those of the author(s) and do not necessarily reflect those of the trustees, officers and other staff of the Mohammed Bin Rashid School of Government (MBRSG) and its associated entities and initiatives.

Abstract

Healthcare systems around the world are becoming increasingly patient-centered; moreover, through advanced technologies and access to information patients are empowered to make more informed and better decisions about their health management. Patients' needs are constantly changing. New technologies in healthcare provisions disrupt the way health systems deliver their services. Competitors who adapt survive the change, and those who do not are more likely to lag behind. Since its establishment, the UAE has strived to create a healthcare sector that delivers high quality services and attracts opportunities. The UAE redefined its regulatory body and adapted to changes in healthcare demands throughout time. This created a stable environment for its healthcare system which is necessary for effective and reliable operations. The country also witnessed numerous reforms in its health sector that led to changes in patient behaviour and demands. However, regulations in the healthcare sector need to be flexible enough to allow for faster changes and rapid adaptation to market demands. As a growing concept, agility has been viewed by organizations as a way to survive the rapid market changes. Agility in UAE's health sector can be an opportunity to develop flexibility in decision making and allow for smoother adaptation.

Keywords: Health Laws, Health Policy, Health Security, Obesity, Diabetes, Health Status, UAE Healthcare

1.0 Introduction

The United Arab Emirates (UAE) population with over 9.121 million citizens according to reports from the World Health Organization (WHO-EMRO, 2017). The UAE healthcare system constitutes of a government-funded sector and a rapidly growing private sector. It caters for the UAE's population of Emiratis, expats, and millions of tourists coming into the county. Healthcare systems around the world are becoming increasingly patient-centered; moreover, through advanced technologies and access to information patients are empowered to make more informed and better decisions about their health management. Patients' needs are constantly changing. New technologies in healthcare provisions disrupt the way health systems deliver their services. Competitors who adapt survive the change, and those how do not are more likely to lag behind. These constant shifts impact the stability of the health sector. The UAE aspires to deliver healthcare services of high standards to its population and to attract patients from the region. With the shifting paradigms in the healthcare sector, it is imperative to be agile to adapt and flourish in unpredictable times.

Since its establishment, the UAE went through numerous shifts and reforms to adapt and flourish. The desired result from all these reforms was the same: improving the population's health and providing high quality healthcare. The UAE has established specific 'Key Performance Indicators' (KPIs) to measure its performance against its targets of 2021 which include:

- Number of deaths from cardiovascular diseases per 100,000 Population
- Prevalence of diabetes
- Prevalence of obesity amongst children
- Average healthy life expectancy
- Prevalence of smoking any tobacco product
- Number of deaths from cancer per 100,000 population
- Percentage of accredited health facilities
- Healthcare Quality index
- Number of physicians per 1,000 population
- Number of nurses per 1,000 population

Given the growing demands of the population, the UAE government aspires to build a world-class health system. The UAE regulation of the healthcare sector occurs on two levels: federal and local. In the UAE, there is a federal health authority known as the Ministry of Health and Prevention (MOHAP). The MOHAP delivers a wide range of healthcare to all residents and citizens through its precautionary and restorative health services. The UAE has three local health authorities: Department of Health-Abu Dhabi, Dubai Health Authority and Sharjah Health Authority (UAE Ministry of Health and Prevention, 2016). Succeeding to the establishment of individual Emirate-based healthcare authorities by Abu Dhabi and Dubai, the attention of MOHAP was moved to the northern emirates (Sharjah, Umm Al Quwain, Ajman, Fujairah, and Ras Al Khaimah) (UAE Ministry of Health and Prevention, 2016).

2.0 UAE Healthcare System & Policies

The UAE government aspires to build a world-class health system to improve the quality of healthcare and the health outcomes for its population. In order to achieve this, it has implemented extensive health system reforms in the past 10 years (Koornneef et al., 2017). The nature, extent and success of these reforms have not recently been comprehensively reviewed. It is important to understand the history of the UAE's healthcare sector, in order to observe how it adapted to change and what role the health regulatory system played in all of this. In this section, the UAE's adaptation to changes in its healthcare system through regulation and reforms is highlighted.

As recently as the late 1960s, in the UAE, it was reported that only half of newborn babies survived and one in three mothers died during childbirth. Almost 50 years later many health outcomes are on par or even better than those seen in developed countries (Koornneef et al., 2017). The maternal mortality ratio (MMR) is now 8 per 100,000 live births (in contrast to an MMR of 14 in the USA) and the infant mortality rate is 5.6 per 1000 live births (5.8 in the USA) (Koornneef et al., 2017). With the impressive and progressive economic growth witnessed in the country, it has been evident that between 2011-2015, the UAE has devoted substantial sums of its fiscal budget to improve and further develop its healthcare sector. During this period, the UAE increased its fiscal spending on the latter

by a substantial 10% of its GDP spending ratio, mounting it to approximately \$11 billion, according to the World Health Organization in 2015. Part of the comprehensive reform plans the UAE has embedded in its futuristic agenda for 2021, was the improvement of healthcare services provided to UAE citizens and residents alike, making it one of the top seven priorities of the futuristic strategy.

In the last 5 decades, the UAE has achieved noteworthy achievements across all sectors including healthcare. However, since the early 2000s, the UAE has been involved with an ambitious program of health system reforms to further improve health and health services and to address cost and quality challenges (Koornneef et al., 2017). These reforms have focused on the introduction of private health insurance and encouraging the growth of private health provision against a back-drop of rapid population growth (Koornneef et al., 2017; Hussein et al., 2018) and a rising prevalence of chronic disease and chronic disease risk factors including obesity, low levels of physical activity and diabetes (Moonesar & Goes, 2017; Moonesar & Hickman, 2017).

Meanwhile, UAE government leaders have emphasized in the country's 2021 vision that all Emiratis and residents alike should have access to comprehensive, world-class facilities with the best quality services in the early diagnosis and preventive medicine. With this focal point, it was made mandatory for all residents to apply for medical insurance schemes. This mandate was applied across the entire country and not confined to the capital only. This allowed for the prediction that consumption patterns of healthcare services were to triple in volume. It also gave rise to the notion that healthcare sector regulators will find it helpful to easily identify the gaps in services at hospitals and clinics across the Emirates. Additionally, the local health authorities projected the availability of better information on the market would pave the way for the smooth inclusion of private sector healthcare providers into the scene. This had other peripheral advantages such as the invitation for additional investment channels into the healthcare industry.

To further endorse the above reform initiatives, Abu Dhabi, Dubai and Sharjah have embarked on new projects that would harness the competitiveness of the private sector in the market. With the aim of incorporating the latter's know-how, expertise, and knowledge; the emirates sought the transformation of these competitive edges into the local market. Through the ratification of a Public-Private Partnership Law (number 22) in 2015 and the cooperation that was launched between Mubadala and Cleveland Clinic; an example includes the government of Abu Dhabi's strategic direction and importance on providing world-class healthcare services to its citizens was apparent.

The Emirate of Dubai, in the same light, completed the reform efforts initiated by the capital by creating a specialized healthcare free zone (Dubai Healthcare City) which aimed at attracting internationally recognized medical service providers to set up in 100% ownership structure. In Dubai, it was noted that this was a first step presenting an initial view on partnership projects as per PPP Regulation Law No. 22 of 2015, and all relevant decisions issued by the Head of Supreme Fiscal Policy Committee, as per Article 38 of the same law, stating that: “the Head of the Committee shall take decisions necessary to execute provisions of this law”.

In addition, the Emirate of Sharjah took part in the reformatory movement in the healthcare sector and announced the establishment of the Sharjah HealthCare City (SHCC), which also aimed at attracting international healthcare companies and private sector establishments to its market landscape. It was estimated that SHCC will require an average of 630 additional beds in the next five years to meet proliferating demand. As such, for example, the attraction of Healthcare Foreign Direct Investment into the Emirate was been designated as a key focus sector.

The UAE is actively expanding its national healthcare system to meet the growing needs of its people and support economic diversification, with leading worldwide medical centers, corporations, and academic institutions playing vital roles in the process. All seven Emirates provide comprehensive healthcare services to their citizens and residents and are rapidly building healthcare infrastructure inclusive of hospitals and clinics (the reference to Exhibit 1 & Exhibit 2), while simultaneously developing the local workforce and competencies. Healthcare services in the context of the UAE is the total of public and private services, and institutions provided by UAE to care for the health of its population (in general), whether in its sector or within the private sector. It includes all hospitals, Clinics, Pharmacies and Human resources from doctors, nurses and all who work in this field.

Exhibit 1: Government (Public) Health Services Statistics (2010-2015)

	2010	2011	2012	2013	2014	2015
No. of Hospitals	32	33	33	34	38	38
No. of Beds	6,393	6,465	6,354	6,100	6,564	7,022

No. of Clinics & Centers	129	138	127	126	127	124
No. of Physicians ¹	4,702	5,105	5,224	7,076	7,453	6,952
No. of Dentists ¹	490	606	583	634	787	737
No. of Nurses ¹	13,123	13,554	13,974	15,442	17,464	16,832

Source: Ministry of Health and Prevention

Note¹: The clear difference in doctors, dentists and nursing is the result of the data of the Health Authority in Abu Dhabi between 2014 and 2015.

Exhibit 2: Private Sector Health Services Statistics (2010-2015)

	2010	2011	2012	2013	2014	2015
No. of Hospitals	53	56	65	73	78	88
No. of Beds	2,436	2,627	3,281	3,660	4,051	5,412
No. of Clinics & Centers	2,521	3,146	3,350	3,531	3,866	4,228
No. of Physicians ¹	8,069	7,751	8,275	9,246	10,932	13,529
No. of Dentists ¹	2,489	2,394	2,560	2,547	3,222	4,179
No. of Nurses ¹	8,648	11,996	13,541	15,281	19,014	29,323

Source: Ministry of Health and Prevention

Note¹: The clear difference in doctors, dentists and nursing is the result of the data of the Health Authority in Abu Dhabi between 2014 and 2015

The review of UAE health infrastructures & services Statistics for the period of 1970-2015 is illustrated in Exhibit 3.

Exhibit 3: Review of Health Infrastructures & Services Statistics (1970-2015)

Years	1970	1980	1990	2000	2015
Population	580,000	1,040,000	1,844,000	3,108,000	9,154,000
Hospitals	7	20	29	30	126

Hospital Beds	Total	700	3,000	4,300	4,473	12,434
	Population/Bed	1/1500	1/3500	1/4200	1/6900	1/736
Health Centers		21	65	90	115	4,352
Physicians	Total	200	1,000	1,500	2,350	20,481
	Population/Physicians	1/2900	1/932	1/1230	1/1322	1/447
Nurses	Total	1,000	3,300	4,600	6,300	46,064
	Population/Nurses	1/580	1/315	1/400	1/490	1/199

Source: Ministry of Health and Prevention; World Health Organization

Recap, the review of UAE National Agenda 2021 key performance indicators for health illustrated in Exhibit 4.

Exhibit 4: UAE National Agenda 2021 key performance indicators for health

Indicators	Prior Results	2021 Targets
Number of deaths from cardiovascular diseases per 100,000 population	297.6 (2012)	158.2
Prevalence of diabetes	19.3% (2015)	16.28%
Prevalence of obesity amongst children	13.54% (2016)	12%
Average healthy life expectancy	68.3 years (2016)	73 years
Prevalence of smoking any tobacco product	Men: 21.6%; Women: 1.9% (2010)	Men: 15.7% Women: 1.66%
Number of deaths from Cancer per 100,000 population	99 (2012)	64.2
Percentage of accredited health facilities	67.96% (2016)	100%
Healthcare Quality Index	Rank 28 (2016)	Rank 20
Number of physicians per 1,000 population	2.53 (2007-2013 average)	2.9
Number of nurses per 1,000 population	3.16 (2007-2013 average)	6

The UAE thus redefined its regulatory body and adapted to changes in healthcare demands over time. This created a stable environment for its healthcare system which is necessary for effective and reliable operations. The country also witnessed numerous reforms in its health sector that led to changes in patient behavior and demands. However, regulations in the healthcare sector need to be flexible enough to allow for faster changes and rapid adaptation to market demands. Organizational agility is meant to curb bureaucracies and make change the norm. In that sense, decision making, setting priorities and allocating resources becomes a process characterized by responsiveness to patient and market needs. In the next section, agility in healthcare sector is discussed in relation to the “agile government” model described in MBRSG (2019).

3.0 Health Security and Agility

The concept of agility goes back a long time and is usually highly associated with the tech-industry. Luckily, the concept has widely spread in the past few years, becoming more and more common place in more service-oriented and traditional industries. With the intention to become less bureaucratic and more responsive to customers’ needs; agile industries are now striving to better mobilize their resources; become more collaborative with business-related partners; and empower their human capital-base to enhance decision making.

The concept of organizational agility can assist healthcare providers; whether private or public; to become more adaptive and resilient to a dynamic global market where status quo is no longer the norm. It is crucial for such a strategic sector to possess the ability to create sound health policies that can encompass the inevitable uncertainty accompanying such dynamism. This sort of adaptation will further enhance policy makers’ foresights and visions.

With respect to the healthcare industry; certain capacities render themselves indispensable. These include: 1) transparency and ubiquitous inter-industrial connections 2) mobility of human resource capacity 3) timely responsiveness to market demand 4) flexible organization structures and contingently 5) management endorsement (Tolf et. Al, 2015).

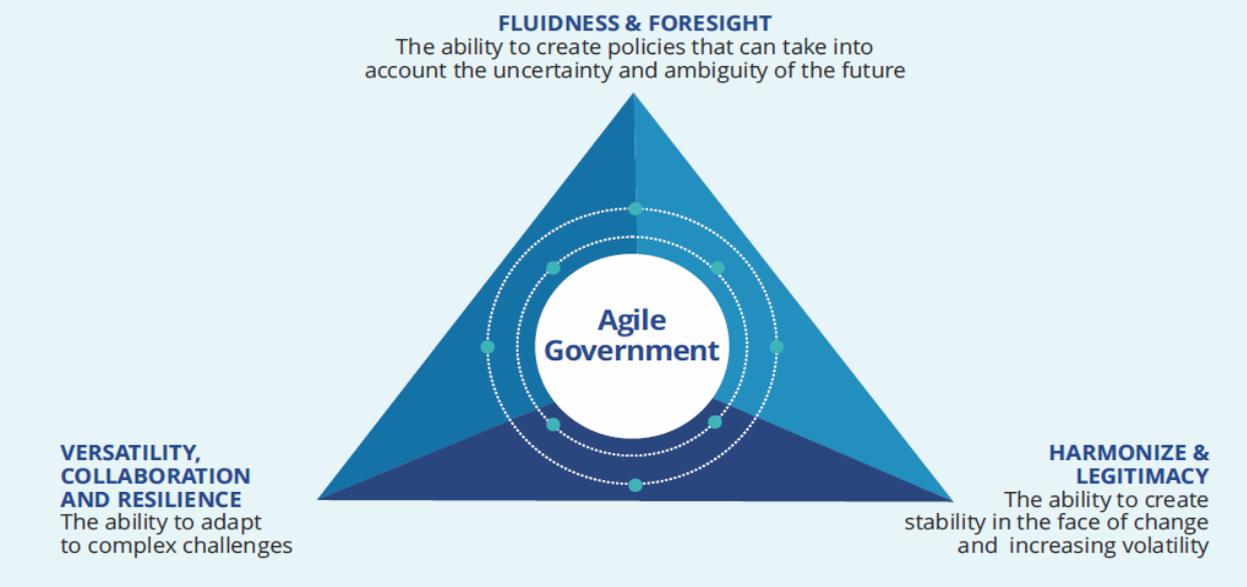
According to the model proposed below (see Exhibit 5), one of the three pillars of agile government – and sectors within – is fluidness and foresight. As for the UAE, the country has secured its health goals for the future by embedding them in its national agenda, and has done so in synchronization with the universal Sustainable Development Goals of the United Nations. The health agenda not only encompassed the important targets of alleviating key health indicators; but also included plans to adopt innovative ways of doing the business, and becoming more responsive to local and worldwide needs and trends; hence more agile.

As for the second main pillar of the model, versatility, collaboration and resilience, these can be achieved through an environment that nurtures collaborations across all sectors such as that in the UAE (MBRSG, 2019). If healthcare industries are to maintain agile structures, they need to prepare for persistent pressure from customers who are continuously seeking improvement in quality levels, efficiency of services offered, and overall satisfaction. This can be achieved with the right collaboration between both private and public service providers. The UAE government, however, needs to pave the way for fruitful PPPs in this sector by securing accurate and updated databases and information networking that will feed into the industry and allow for timely synchronization amongst all stakeholders involved. A rigorous information infrastructure will assist service providers to devote their time and effort to the main beneficiaries, i.e. patients, creating the agility needed to remain competitive and trustworthy in such a strategic market. Furthermore, holistic databases could help identify loopholes in the sector, and possible opportunities for collaborations to overcome them.

The third pillar is harmony and legitimacy. This area is concerned with creating stability in the face of rapidly changing environments and disruptive markets. A truly agile healthcare sector is always prepared to deal with unpredictable volatility by steering away from chaos while at the same time breaking bureaucratic restrictions to reach a much needed state of flourishing stability. In the context of the UAE, physicians and patients are constantly moving in and out of the country. The Emirati healthcare system caters not only for locals, but also for expats and tourists who are in a constant state of flux. While such flow of patients can bring many opportunities for the healthcare sector in the UAE, it can also limit its growth, as many expats might opt for receiving medical care in their countries of origin. Patient retention is crucial for a country like the UAE, where the healthcare sector capacity is huge. However, it requires setting attractive conditions that capitalize on both service quality and affordability (like offering better and more comprehensive insurance plans). Similarly, the retention of physicians is of great importance for creating a stable

healthcare sector. The majority of the physicians in the UAE are expats who might relocate outside the UAE seeking better employment opportunities. Retaining physicians should thus involve creating desirable working conditions and that could be achieved through better visa and residency offers for physicians and their families and relevant training, collaboration and research opportunities.

Exhibit 5: Agility Government Structural Tension Foundations



Source: Stephens et al., 2019 (MBRSG Publication)

4.0 The Way Forward

Since its establishment, the UAE has made significant leaps in its healthcare sector towards better service quality, wider inclusion, and clearer and more unified regulations. The UAE is aiming to have the best in the world healthcare delivery and systems. With its health sector catering for locals, residents and tourists, the challenge is intensified. Healthcare industries today are witnessing rapid advancement in terms of technology. Patients are more empowered in their health management decisions. Governments around the world have placed patients at the heart of their strategies for developing better healthcare sectors for their citizens and medical tourists. The UAE thus is operating in a highly competitive and rapidly changing environment which can put pressure on its health sector to adapt. Adaptation has to be fast and has to seize opportunities as they emerge. Therefore, agility in UAE's health sector is key to help develop flexibility in decision making. Agility is a concept that has gained the attention of global organizations as a way to survive in the fast-changing times, and its value for healthcare organizations should not be overlooked.

5.0 Appendix A

UAE Healthcare Evolution: Milestones

Year	Milestones
1938	Under the British rule, a medical officer was appointed for the Trucial Coast and commissioned.
1939	An Indian physician was sent by the British rulers to serve in a dispensary in Dubai.
1943	It was the beginning of healthcare for Dubai with opening of a small healthcare centre in Al Ras area.
1949	The British government built Al Maktoum Hospital, a small hospital in Dubai and appointed a British physician from the Indian Medical Service to initiate modern medical service.

1951	Under the patronage of His Highness the late Sheikh Saeed bin Maktoum, the first phase of the Al Maktoum Hospital is built by the British government.
1950s – 1960s	The American Mission hospitals were established in Sharjah, Al Ain, and Ras al Khamiah.
1952-1973	The construction of the Al Maktoum Hospital is completed with 157 beds
1965	The Abu Dhabi government employed one physician; three others were in private practice.
1966	Health Centre (clinic) in Abu Dhabi for outpatients services only.
1967	Dr. Philip Horniblow OBE, who was Director of Health in Abu Dhabi between 1967 and 1971.
1969	Small Hospital 10 beds, 1 doctor and 10 nurses.
1971	Field Hospital 1, Al-Ain
1972	The Ruler of Dubai establishes the Department of Health and Medical Services (DOHMS).
1972	His Highness Sheikh Hamdan bin Rashid Al Maktoum, Deputy Ruler of Dubai, UAE Minister of Finance is declared to be the President of DOHMS.
1972	During the same year, RASHID is opened in Dubai, complete with 454 beds.
1975	Seven Community clinics opened in Dubai with the aim of reaching out to the people living in the different areas of the Emirate. The Military Hospital, Abu Dhabi, at the Al- Nahyan Barracks.
1975	Federal Law No 7 of 1975 concerning practicing medicine
1976	The UAE had 774 doctors
1976	There were 1,500 hospital beds
1978	The Central Services Complex, a designated complex for stores, laundry, CSSD and the engineering division, is established. The Central Services Complex provides essentials to Dubai's health facilities and handles the supply of drugs and equipment. Field Hospital 2, Sharjah
1979	The Department of Health and Medical Services (DOHMS) moves into its new headquarters located near Rashid Hospital.
1981	UAE Federal law no (28) of 1981 concerning book and treat mentally ill
1983	A state-of-the-art hospital is inaugurated in Diera, known as the Dubai Hospital, equipped with 625 beds. Zayed Military Hospital, Abu Dhabi; fully-equipped modern hospital.

1983	UAE Federal Law No 4 of 1983 concerning Pharmacy profession, pharmaceutical establishments and code of practice
1984	Falah Modern Hospital, Sharjah, fully-equipped modern hospital.
1984	UAE Federal Law No 5 of 1984 concerning non-practicing physicians and pharmacists to some medical professionals
1985	There were 2,361 physicians, 6,090 nurses, 242 dentists, and 190 pharmacists, almost all of whom were foreigners.
1986	Al Wasl Hospital, a 374 bed specialized maternity and pediatric hospital, is inaugurated. On 4th of January, 2012, as per the orders of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, the name of Al Wasl Hospital is changed to Latifa Hospital, to pay homage to the loving memory of his late mother Sheikha Latifa Bint Hamdan bin Zayed Al Nahyan. The federation's first hospital specializing in pediatric and maternity care, the 374- bed Al Wasl Hospital in Dubai.
1986	His Highness Sheikh Mohammed issued this directive on the sixth anniversary of his accession as the Ruler of Dubai
1986	The UAE had forty public hospitals with 3,900 beds and 119 clinics.
1988-1995	Six community health centres are opened across Dubai to serve the people living in the areas.
1995	UAE Federal Law No 14 of 1995 on combating narcotic drugs and psychotropic substances
1995	Federal Law No 20 of 1995 on medicines and pharmaceutical products derived from natural sources
1998	The concept of primary healthcare is established and adopted in the line with the philosophy of the World Health Organization's motto "Health For All by the Year 2000".
1998	20 health centres are opened across Dubai to ensure access to basic primary healthcare.
2000	The number of hospital beds has increased from 1421 in 1990 to 2048 in 2000.
2005	The decision of the Council of Minister (6) of 2005 concerning charging for surgeries and hospital stays for non-citizens
2007	The Dubai Health Authority (DHA) was formed under the directives of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, and Ruler of Dubai.
2007	The Cabinet number 7 of 2007 on health advertisements
2007	Ranked 34th for overall health infrastructures and services according to the Legatum Prosperity Index
2007	Ministerial Decree number (430) of 2007 m on health declarations list

2008	The Federal law number 11 year 2008 in fertilization centers Emirate licensing
2008	Council of Ministers decision No 7 of 2008 on medical examination system for arrivals to the State for work or residence
2009	Federal Law No 18 of 2009 on births and deaths (obituaries)
2009	Council of Ministers resolution (33) of the year 2009 by the regulations of the Federal law number (10) of 2008 on medical liability
2009	Council of Ministers resolution (36) Act 2009 concerning the implementing regulations of the Federal law no (11) for 2008 on IVF centers license in the Emirate
2009	Federal Law No 15 of 2009 on tobacco control
2010	Council of Ministers resolution (29) for the year 2010 on community protection system of HIV and protect the rights of people living with.
2011	Ministerial Decree number 44 for the year 2011 on the regulations of the Federal Law No 18 of 2009 in regulating under births & death (obituaries)
2012	The decision of the Council of Ministers (16) for the year 2012 concerning citizen's training system to spend a year of excellence in health facilities of the Ministry of Health
2012	Ministerial 900 for the rear 2012, Ministry of Health general and technical conditions to be met for Pharmacies
2012	Ministerial Decree number (932) of 2012 on hygiene and professional should be available in private pharmacies
2013	Council of Ministers decision No 24 for six in 2013 on the regulations of the Federal law number 15 year 2009 on tobacco control
2013	Ministerial Decree number (60) of 2013 on technical and sanitary conditions that must be met by special medical stores
2014	Federal Law No 14 of 2014 on communicable disease control
2014	Ministerial Decree No. 1122 of 2014 – Narcotics, Controlled and Semi Controlled Medicines- Classification, Prescribing, Dispensing.
2015	Federal law no (4) for the year 2015 on private health establishments.
2015	Council of Ministers resolution 39 of 2015 on a medical stock strategist
2016	The decision of the Council of Ministers (5) for the year 2016 to amend certain provisions of the Council of Ministers decision No 7 of 2008 on medical examination system for arrivals to the Emirate for work or residence
2016	UAE Ministry of Health & Prevention (MOHAP) Decree (888) for the year 2016 on prescribing and distribution of narcotic, control and semi control medicines
2016	UAE Cabinet Decision No 44 in the year 2016 on the Regulation of UAE MOHAP Services Fee

2016	UAE Ministry of Health & Prevention receives ISO 9001:2015 certification for Quality Management Systems
2017	Ranked 25th for overall health infrastructures and services according to the Legatum Prosperity Index
2017	There are more than 16,000 doctors.
2017	Ministerial decree No. 550 of 2017 issued on the declaration of death.
2017	There are more than 11,000 hospital beds.
2018	Ministry of Health and Prevention provides early detection services for neonatal genetic diseases
2018	Ministerial Decree No. (28) of 2018 for the registration of innovative medicines and rare drugs
2018	Joint Commission International honors Ministry of Health and Prevention for the highest number of JCI-accredited health facilities

Source: This Table has been compiled by Immanuel Azaad Moonesar using multiple sources of information including the Ministry of Health and Prevention, Health Systems Profile - UAE Regional Health Systems Observatory - EMRO; Young Vision; Etihad Museum; Beshyah & Beshyah (2012).

References

Hussein S. & Moonesar, I.A. (2018). Abu Dhabi Healthcare System- Diagnosis Related Group Perspective. International Journal of Medical, Pharmacy and Drug Research (IJMPD), 2(1). February 2018. ISSN: 2456-8015. DOI:10.22161/ijmpd

Koornneef, E., Robben, P., & Blair, I. (2017). Progress and outcomes of health systems reform in the United Arab Emirates: a systematic review. BMC health services research, 17(1), 672. doi:10.1186/s12913-017-2597-1

Legatum Prosperity Index (2017). Retrieved from: <http://www.prosperity.com>

Moonesar, I.A. & Goes, J. (2017). Enabling and Predisposing Factors Using the Andersen Model: UAE Healthcare Professionals Policy Involvement. Journal of Academic Perspectives. 2017(1): 34-48. ISSN 2328-8264

Moonesar, I.A. & Hickman, C.J.L. (2017). How the UAE can reduce the Prevalence of Obesity among the Youth? - A Health Policy Perspective. Advances in Obesity, Weight Management and Control Journal, 6(2): 00150. DOI:10.15406/aowmc.2017.06.00150

Moonesar, I.A. (2013). U.S Public Health Policy: A Current Briefing. Chartridge Books Oxford: UK. ISBN-10: 1909287865 & ISBN-13: 978-1909287860.

Moonesar, I.A., Elsholkamy, M., & Sayani, H. (2018). The State of UAE Healthcare Service Delivery: Public perceptions- Preliminary Insights. Mohammed Bin Rashid School of Government: Dubai, United Arab Emirates. DOI: 10.13140/RG.2.2.32456.21760

PWC (2017). Changing demographics demand healthcare reforms. retrieved from: <https://www.pwc.com/gx/en/industries/healthcare/emerging-trends-pwc-healthcare/changing-demographics-healthcare-reform.html>

Tolf, S., Nyström, M.E., Tishelman, C., Brommels, M. and Hansson, J., 2015. Agile, a guiding principle for health care improvement? International journal of health care quality assurance, 28(5), pp.468-493.

UAE Federal Competitiveness and Statistics Authority (2018). Retrieved from <http://fcsa.gov.ae/en-us>

UAE Government, 2017 Good health and well-being. Retrieved from <https://government.ae/en/about-the-uae/leaving-no-one-behind/3goodhealthandwellbeing>

UAE Government, 2018. Health & Fitness. Retrieved from <https://www.government.ae/en/information-and-services/health-and-fitness/vision-2021-and-health>

US-UAE Business Council: The U.A.E. Healthcare Sector, 2016. Retrieved from: <http://usuaebusiness.org/wp-content/uploads/2016/09/Healthcare-Report-Final.pdf>

WHO. (2014). A Universal Truth: No Health Without a Workforce. World Health Organization: Geneva, Switzerland. Retrieved from https://www.who.int/workforcealliance/knowledge/resources/GHWA-a_universal_truth_report.pdf?ua=1

WHO. (2018). Global Health Expenditure Database: UAE National Health Account Reports. World Health Organization: Geneva, Switzerland. Retrieved from <http://apps.who.int/nha/database/ViewData/Indicators/en>

WHO-EMRO. (2017). Eastern Mediterranean Region: Framework for health information systems and core indicators for monitoring health situation and health system performance. World Health Organization: Regional Office for the Eastern Mediterranean. Retrieved from http://applications.emro.who.int/docs/EMROPUB_2017_EN_16766.pdf?ua=1&ua=1

WHO-SPH. (2018). EMRO report on the Strategic Partnership for International Health Regulations (2005) and Health Security (SPH) Selected Health Systems, UHC, SDG Indicators for SPH. World Health Organization: Geneva, Switzerland. Retrieved from: <https://extranet.who.int/sph/sites/default/files/document-library/document/EMRO.02.10.2018.pdf>

Author(s) and Citations

This Report was Authored by:

Immanuel Azaad Moonesar

Associate Professor, Mohammed Bin Rashid School of Government, Dubai, UAE.

Mona El-Sholkamy

Assistant Professor, Mohammed Bin Rashid School of Government, Dubai, UAE.

Lama Zakzak

Associate Researcher, Mohammed Bin Rashid School of Government, Dubai, UAE.

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Research at The Mohammed Bin Rashid School of Government

The Mohammed Bin Rashid School of Government (formerly Dubai School of Government) is a research and teaching institution focusing on public policy in the Arab world. Established in 2005 under the patronage of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai, in cooperation with the Harvard Kennedy School, MBRSG aims to promote good governance through enhancing the region’s capacity for effective public policy.

Toward this goal, the Mohammed Bin Rashid School of Government also collaborates with regional and global institutions in delivering its research and training programs. In addition, the School organizes policy forums and international conferences to facilitate the exchange of ideas and promote critical debate on public policy in the Arab world. The School is committed to the creation of knowledge, the dissemination of best practice and the training of policy makers in the Arab world. To achieve this mission, the School is developing strong capabilities to support research and teaching programs, including:

- Applied research in public policy and management;
- Master’s degrees in public policy and public administration;
- Executive education for senior officials and executives; and,
- Knowledge forums for scholars and policy makers.

The MBRSG Research Department focuses on the following six priority policy areas:

- Future Government and Innovation
- Education Policy
- Health Policy
- Public Leadership
- Social Policy, Wellbeing and Happiness
- Sustainable Development Policy
- Economic Policy



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