



الشركة الكويتية للعلوم الحياتية
Kuwait Life Sciences Company



Kuwait Health Report 2019

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Executive Summary

There are five entities – the Ministry of Health, Ministry of Public Works, Dhaman, Kuwait University, and Kuwait Oil Company, in Kuwait right now developing mega scale healthcare projects, adding more than 7,000 beds to the healthcare system of the country. The budget of the Kuwaiti government for 2018-19 is close to **17 bn KD**, and the budget of the Ministry of Health is over 2 bn KD – however, these numbers do not consider the spending by the Ministry of Defence, Ministry of Interior, and the Kuwait Oil Company which contributes significantly to the healthcare spending of the country.

Similar to the unified overseas treatment processes present in Abu Dhabi and Qatar, Kuwait has a Department of Treatment Abroad present under the Ministry of Health – this office caters to Kuwaiti citizens only and patients are only eligible if the treatment sought is unavailable in Kuwait.

Under the New PPP Law, Kuwait Authority for Partnership Projects (KAPP) has replaced the Partnerships Technical Bureau (PTB), which was previously the main body responsible for implementation of PPP projects in Kuwait. The new PP law gave scope to Dhaman, previously known as the Kuwait Health Assurance Company, to commence the development of primary health centers and the three hospital projects in Kuwait for providing healthcare services to the expat population of Kuwait. Similar to Dhaman, an initiative is in the works to provide health insurance to retirees, over 100,000 in number, recognized as family patriarchs of Kuwaiti nationality.

Originally referred to as the ‘Nine New Medical Towers Project,’ the Ministry of Health will continue to focus its expansion projects on five hospitals: Farwaniya Hospital, Al Adan Hospital, Ibn Sina Hospital, Kuwait Children’s Hospital, and the Kuwait New Maternity Hospital. This expansion will add more than 3,500 beds to the MoH hospital network.

The New Jahra Hospital opened in the first quarter of 2018 - a full-service general secondary care hospital, hosting a select complement of specialized services and the infrastructure to accommodate select tertiary care capabilities. The first phase of the Jaber Hospital was inaugurated in by His Highness the Emir Sheikh Sabah Al-Ahmad Al-Jaber Al-Sabah in November 2018. With over 1100 hospital beds, a helipad, 36 operating rooms, and parking for over 5000 vehicles, it is aimed to be one of the major hospitals in the Gulf region – providing significant medical services to Kuwait and the region.

Other changes to the Kuwaiti health system include amendments to the Mental Health Bill, addition of thirty-two health centers, and new processes in place for the validation of foreign medical certificates. It is also anticipated that Kuwait will see a 11% CAGR in the medical device market driven by the rise in chronic diseases, demand from the private sector, and development of healthcare infrastructure.

The authors hope that in the future, Kuwait will invest in the creation of an independent healthcare regulatory in Kuwait that will lead the policy development, licensing, quality assurance and the overseas healthcare functions in Kuwait. In addition, development of hospital information systems and the implementation of a Kuwait-wide electronic health record system are the need of the hour to keep in pace with the rise of the digital health market.

Introduction

There are currently around five entities developing 13 large scale mega healthcare projects in Kuwait. These projects will add more than 7,000 beds to the Kuwaiti healthcare system.

The following entities are involved in the aforementioned projects:

- 1) **Ministry of Health** – adding over 3,500 beds, 150 operating rooms and 500 outpatient clinics across 5 different hospital projects (four general and four specialized) have been planned by the MoH at with an estimated total budget of approximately **1.25 bn KD or 4.27 bn USD**
- 2) **Ministry of Public Works** – two new hospitals (~1,500 beds) in the new urban areas in Kuwait
- 3) **Dhaman previously known as Kuwait Health Assurance Company (KHAC)**, a Public Private Partnership (PPP) between the Ministry of Health (MoH), Ministry of Finance (MoF), the Kuwait Investment Authority (KIA) and the private sector to establish a health maintenance organization, with three 250 bed hospitals, 10 clinics and one single day surgery center.
- 4) **Kuwait University (KU)** – New KU Academic Medical Center (~600 beds). Kuwait's only medical school has operated without its own academic medical center since its inception in 1973 and has relied on the neighboring Mubarak General Hospital (MGH). It is understood that the Ministry of Health will transfer the ownership of Mubarak General Hospital to KU once the Jaber Hospital Project is complete. It is also understood that KU will look to build its own facility on the MGH campus.
- 5) **Kuwait Oil Company** – Also called the Al – Ahmadi Hospital, the medical facility is owned by the Kuwait Oil Company (KOC). It will cater to the needs of the 120,000 employees of KOC who form the backbone of the oil industry in Kuwait. Constructed on an area of 380,000 sq. meters, the facilities have cost close to 94 million KD. The hospital has a 300-bed capacity that can be expanded to 400 beds, an emergency shelter, and residential building with 256 apartments.



Figure 1: Al-Jahra Hospital Nuclear Medicine and Radiology Building

While the MoH maintains a solid end state vision of the healthcare system (separation of regulator, from provider and payor functions, with a strong dedication to improving quality and private sector participation as was done in the neighboring emirate of Abu Dhabi), the establishment of KHAC and the Private Health Insurance Initiative for Kuwaiti Retirees are seen as strong contributors to the diversification of health system finance in Kuwait. The 2011-12 Kuwait Government budget was the first time the Ministry of Health spends over **1 bn KD (3.3 bn USD)** on the expenditure on the public healthcare system. The budget for 2018-19 is close to **17 bn KD**, and the budget of the Ministry of Health is over 2 bn KD.

Furthermore, the percentage of healthcare spending by the MoH as a percentage of overall government expenditure has stayed relatively stable at around 7%, for this budget it is almost 11% of the total budget. However, these figures do not consider the amount spent by the other 8

government related entities such as the Ministries of Defense and Interior, and of the Kuwait Oil Company, that make up between 10 to 20% of the healthcare sector in Kuwait.

With KHAC aimed at refinancing the healthcare costs of the **expat population** of Kuwait and the Private Health Insurance Initiative for Kuwaiti Retirees aimed at starting to address the healthcare finance needs of the **national population**, the government of Kuwait is sending strong signals of cooperation to the private sector in an attempt to curb the exponential increases in public healthcare spending.

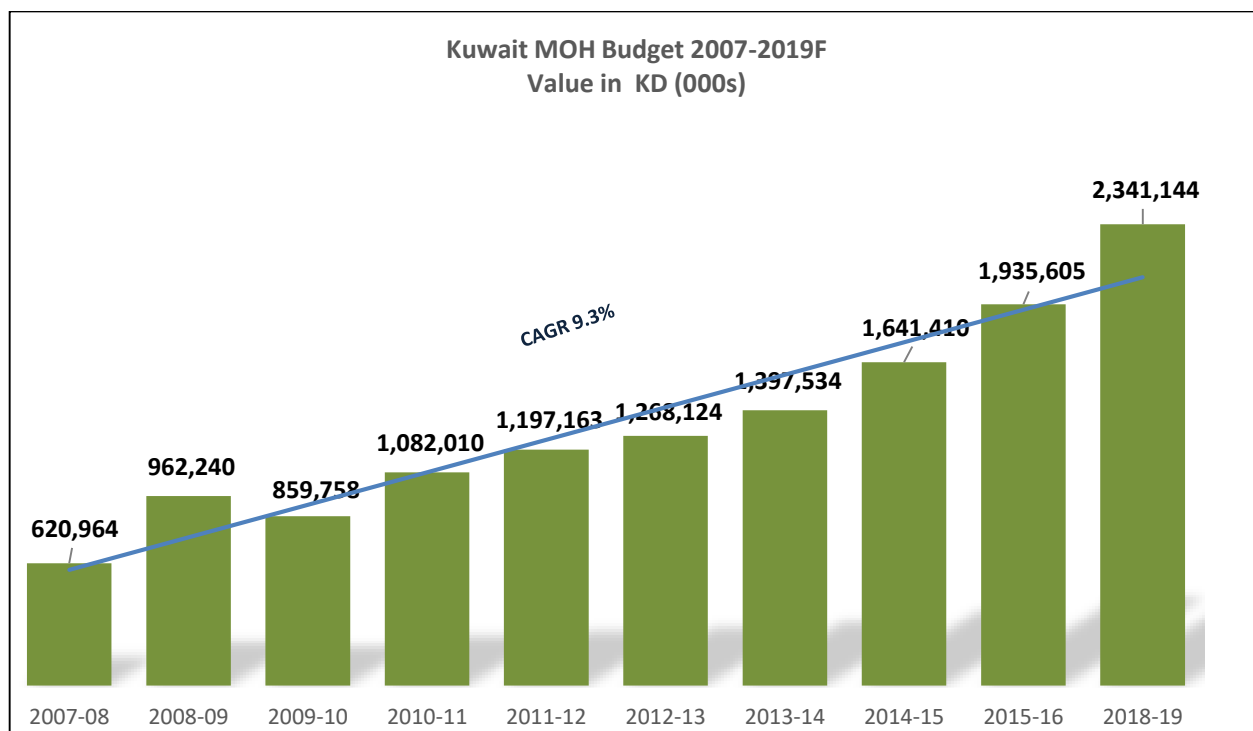


Figure 2: Ministry of Health Budget 2007-2018

A Note of Overseas Medical Tourism

There are seven different government entities that send patients abroad for medical tourism in Kuwait. These include:

1. The Amiri Diwan
2. The Diwan of the Crown Prince
3. The Diwan of the Prime Minister
4. The Ministry of Health
5. The Kuwait Oil Company
6. The Ministry of Defense (including Army, National Guard, Air Force, Navy)
7. The Ministry of Interior (Police)

Similar to the unified overseas treatment processes present in Abu Dhabi and Qatar, Kuwait has a Department of Treatment Abroad present under the Ministry of Health. This office caters to Kuwaiti citizens only and patients are only eligible if the treatment sought is unavailable in Kuwait.

On the 17th of September 2014, the Ministry of Health issued a ministerial decree to curb the stipends issued for Overseas Medical Care, after wide spread public criticism and alleged abuse by both patients and their accompanying chaperones. Furthermore, it was reported in May, 2018 that the Kuwaiti government would form a team to look into the financial allocations for overseas treatment as the budget for treatment abroad was exceeded.

Originally, the Ministry was providing a daily stipend of 100 KD for each patient and a further 100 KD for the 1-2 chaperones. Any patient sent overseas had the right to one chaperone, with patients under the age of 18 or over the age of 65 allowed a maximum of two. This resulted in the government providing up to 300KD per day for a patient sent abroad, which when extrapolated results in **~110,000 KD or ~375,000 USD per year**, which is in addition to the amount spent on the medical care of the patient and the airline ticket. As of October 1st, 2014, the Ministry has since reduced the daily stipend to 75KD for the patient and 50KD for only one chaperone. If a second chaperone is needed, the Ministry would provide the airfare alone.

According to a report by the **State Audit Bureau (SAB)** published in January of 2016, there have been 6,456 reported cases of abuse in the Overseas Medical Program of the Ministry of Health from January 2014 to January 2015, whereby due to pressure from certain high-ranking officials and Members of Parliament, the vast majority of these cases did not immediately require treatment abroad.

It is widely accepted that current government spending on sending Kuwaiti patients and their families abroad is unsustainable. The time for an executive decision to unify the overseas healthcare tourism process is apparent. Any such unification should be done in tandem with the development of a unified **Kuwaiti Health Authority** (see section on: “Future Landscape of Kuwait” for more details).

Public Private Partnership (PPP) Healthcare project

Under the New PPP Law, Kuwait Authority for Partnership Projects (KAPP) has replaced the Partnerships Technical Bureau (PTB), which was previously the main body responsible for implementation of PPP projects in Kuwait. KAPP is expected to have greater autonomy and authority than its predecessor, while its staff and assets are expected to remain broadly the same. KAPP will be supervised by and attached to the Ministry of Finance and overseen by the PPP Higher Committee.

In mid-2014, Kuwait passed the New PPP Law. However, other than the introductory provisions, the New PPP Law did not come into full force and effect until the publication of the law's executive regulations (Implementing Regulations) which took place on 29 March 2015.

The Kuwaiti government has been pursuing different mechanisms of financing its healthcare system since the 1980s. It is often confused that the Kuwaiti constitution guarantees its citizens free health care (Article 15 of the 1962 Kuwaiti Constitution states that “the State cares for public health and for means of prevention and treatment of diseases and epidemics”), however, with regards to the Privatization Law of 2010, the Kuwaiti Parliament decreed that the sectors of healthcare and education **not** be **fully** privatized. The privatization law dictates that any government entity/asset/corporation must be ‘privatized’ according to the following framework:

- 50% will be offered to the public by means of a public joint stock holding company listed on the Kuwait Stock Exchange (KSE)
- 26% (**golden operating share**) will be offered to a private (technical/financial) partner/consortium. Strong preference is given to Kuwaiti companies, particularly those

already publicly listed. The consortium is also encouraged to involve international technical partners and investors with exemplary track records

- 24% is retained by the State of Kuwait through the state-owned investment vehicle, the Kuwait Investment Authority (KIA) which will own 19% and the Public Institute for Social Security (PIFSS) which will own 5%

Ongoing projects or procurements:

The New PPP Law provides that projects already signed under the old law can continue under the existing regime; however, there is no interim legal framework for PPP projects that are already in the procurement stage but not yet signed. The procurement of PPP projects where the procurement process has already commenced but not been concluded should therefore recommence and secure the approval of the PPP Higher Committee. Practically speaking, this may result in the redrafting and rerelease of some procurement developed under the old regime documentation. It is hoped that the new regime will open the door for the procurement, development and implementation of a greatly increased flow of PPP projects in Kuwait. There are a number of ambitious projects in the pipeline that have been announced by KAPP, including:

Kuwait Health Assurance Company (KHAC)

The Kuwait Health Assurance Company, rebranded as Dhaman is a public-private-partnership (PPP) entity, with a pledged capital of KD 230 Million held by Kuwait Investment Authority and Public Institution for Social Security at 24%, Arabi Holding Group at 26% and 50% of shares to be allocated to Kuwait's nationals.

Dhaman commenced the operation of primary health centers in Kuwait, which they see as the patient's first entry point into the health system. In October 2018, Dhaman concluded the recruitment of staff required to provide primary care services to the residents of Kuwait. In addition to providing curative services, the primary health centers would provide health promotion, disease prevention, health maintenance, counseling, and patient education.

In support of Kuwait's Vision 2035 to provide world-class healthcare services to a large segment of the population, Dhaman's health strategy involves building a network of three hospitals offering secondary care geographically spread across Kuwait, the first of which is in Ahmadi and second in Amghara in Jahra, according to expats' demographic distribution throughout Kuwait. These hospitals would provide secondary healthcare to expats while tertiary care would be relegated to the MOH hospitals. While the hospital in Ahmadi broke ground in 2017, the Dhaman Hospital in Jahra will be a five-story hospital with a built-up area of 87,536 sq. m, offering secondary healthcare services including a capacity of 300 beds, 13 intensive care units and 11 operating rooms, in addition to trauma and rehab centers, diagnostic centers, delivery rooms and accident and emergency services.

Dhaman also signed a Strategic Partnership Agreement with multinational technology company IBM, for the development of the Digital Health System and the launch of the Kuwait Digital Health Roadmap Initiative. Dhaman will establish a Digital Health System and launch the Kuwait Digital Health Roadmap Initiative to advance and digitize the healthcare sector including the management of Electronic Medical records and providing high-quality services to all beneficiaries in a professional and efficient manner. The agreement aims to achieve a qualitative leap in the quality of services provided to the public to increase efficiency, reduce operational costs and waste, and optimize capital assets and equipment. It will also link and integrate different departments at Kuwait's Ministry of Health, which will permit the ministry to monitor health facilities and real time performance management. The partnership with IBM is divided into two phases; the first of which is

offering consulting services to help transform Dhaman into a leading digital healthcare system in the MENA region, and the second is project management and execution of the vision. These phases in return will set the long-term agenda for the future vision in technology through well-studied experiences and scientific methodologies, and determining the technological and strategic requirements to achieve a digital healthcare system.

This comes in addition to signing an agreement with JCI, an international non-profit organization and the oldest and largest accreditation organization in the field of healthcare in the world, to strengthen and enable core activities to meet standards in clinical care, effective leadership, safe facility management and continuous quality improvement.



Figure 3: Health Minister Sheikh Dr. Basel Al-Sabah (right) takes part in a groundbreaking ceremony of the Dhaman Hospital

Private Health Insurance Initiative for Kuwaiti Retirees

Just as Dhaman is endeavoring to primarily diversify the financing of expat healthcare expenditure, a new initiative will develop a private health insurance scheme aimed at the 105,000 to 107,000 retirees recognized as family patriarchs of Kuwaiti nationality (usually male and above the age of 55). This Private Health Insurance initiative for Kuwaiti Retirees has been budgeted at around 100 Mn KD or 342 Mn USD.

Kuwait's Central Tenders Committee (CTC) launched a tender to provide health insurance to retired citizens, in accordance with law No. 114 of the Ministry of Health in 2014. Seven companies accepted the government invitation, including Al Ahleia Insurance, Gulf Insurance Company, Kuwait Insurance, Enaya Insurance, Wethaq Takaful Insurance, Warba Insurance, and Gulf Takaful Insurance Company.

The tender was awarded to Gulf Insurance Company with lowest outbid of 82.48 mn KD or 272 mn USD on September 2015, so the health insurance program for retirees is expected to be effective sometime in 2016. The yearly limit of coverage for each member of the plan is **17,000 KD** and will cover non-cosmetic primary, secondary and tertiary care within Kuwait without any co-payments.

In 2018, this health insurance will be expanded to include new services like dental treatment, dental implants, removal of benign and malignant tumors, and cardiac surgeries. The total number of Afya health insurances cards issued for Kuwaiti retirees has increased to 123,00.

Expansion of Ministry of Health Hospitals

Originally referred to as the 'Nine New Medical Towers Project,' the Ministry of Health will continue to focus its expansion projects on the following five hospitals:

- 1) Farwaniya General Hospital
- 2) Al Adan General Hospital
- 3) Ibn Sina Specialized Hospital
- 4) Kuwait Children's Hospital
- 5) Kuwait New Maternity Hospital

Out of the 5 planned facilities, all the projects have started construction at the date of writing this report, these include the 780 bed Kuwait New Maternity Hospital, which recently broke ground in January 2017. These will provide secondary and tertiary care services to the 125 primary care centers being operated by the MoH right now.

Table 1: Summary of Ministry of Health Hospital Ongoing Projects

Hospital Name	Project	No. of Beds	Build up Area (sqm)	No. of Floors	Budget (KD mn)	Main Contractor	Project Status	Completion Date
Farwaniya		955	406,330	1+8	285	Behbehani	UC	2Q2019
Al Adan		632	286,280	1+13	232	Behbehani	UC	2Q2019
Ibn Sina		427	145,000		120	Alzammami	UC	1Q2019
Kuwait Children's Hospital		792	300,000			SSH	UC	2020
Kuwait New Maternity Hospital		780		1+17	250	SSH	UC	3Q2021

*UC-Under Construction

New Jahra Hospital

The Amiri diwan had invited tenders by the Central Tenders Committee (CTC) Grade 1 Contractors for the construction of New Jahra Hospital Project, Kuwait for fast track execution in 24 months.

The New Jahra Hospital (NJH) opened in the first quarter of 2018, with the opening being patronized by His Highness the Amir Sheikh Sabah Al-Ahmad Al-Jaber Al-Sabah. It is a full-service general secondary care hospital, hosting a select complement of specialized services and the infrastructure to accommodate select tertiary care capabilities. The hospital is planned around an atrium five stories high, one of the largest gynecological, emergency, and accident services. The facility has been with a total built up area of approximately 375,000 SQM and supporting approximately 1,100 inpatient beds, a free-standing multi-specialty dental center accommodating approximately 100 clinics with their procedure and support areas.

Jaber Hospital

The first phase of the Jaber Hospital was inaugurated in by His Highness the Emir Sheikh Sabah Al-Ahmad Al-Jaber Al-Sabah in November 2018 after many challenges. The main building of the hospital comprises of five structures each of which is 10 stories high. With over 1100 hospital beds, a helipad, 36 operating rooms, and parking for over 5000 vehicles, the hospital occupies 725,000 sq. meters. The hospital is aimed to be one of the major hospitals in the Gulf region – providing significant medical services to Kuwait and the region.



Figure 6: Jaber Al Ahmad Al Jaber AL Saba Hospital

The Ministry of Health has assumed responsibility over the management and operation of the Jaber Hospital by the direction of the Kuwaiti Cabinet in July 2018. This step was taken by the recommendations made by the joint ministerial committee for economic affairs and public services.

The total cost to operate the hospital is estimated at KWD 10 billion over 50 years – without taking inflation into account. Comparing the costs of Jaber Hospital and Amiri Hospital, the cash salaries of the former would amount to 121 Mn KD as opposed to 40 mn KD of Amiri hospital. The cost of medical supplies to Jaber Hospital would be almost 50 mn KD while that for the Amiri Hospital would be 16.5 mn KD. The projected cost of patients' food is 1.67 mn for Jaber Hospital and close to 500,000 KD for Amiri Hospital.

In September 2018, the Kuwait government assigned the Public Investment Authority and Ministries of Health and Finance to select a strategic partner and international operator to manage Jaber Hospital by September 2019.

State of Private Healthcare in Kuwait

There are approximately 139 private clinics in Kuwait right now which contribute to a little under 15% of the healthcare spending in the country.

While the Al Salam Hospital is currently located in Bneid Al Gar with 184 beds and with Obstetrics and Gynecology, Pediatrics, Surgical, Medical and Critical Care specialties, they have an ongoing project to build an Al Salam Hospital in the Al Ahmadi region which is to be a 50-bed hospital. The new hospital is to have 46 medical clinics and will start out with 50-125 bedrooms, 7 operating rooms in addition to the maternity ward, 8 rooms for day surgeries, and 8 ICU-CCU rooms. The maternity ward is to have 9 delivery rooms and two rooms for cesarean sections. The hospital will also have parking for 252 cars.

The Kuwait Hospital in Sabah Al Salem and International Hospital Salmiya are two hospitals whose opening has been delayed. A legal case with the Alleghany group has been the reason behind the delay in the opening of the Kuwait Hospital.

There are currently 25 new medical centers to be completed soon that will supply 559 clinics across 309 floors which will cover the Sabah Al Salem, Sha'ab, Bneid Al Gar, Dasman, Mahboula, Sharq, Jabriya, Salmiya, Jahra, and Farwaniya regions. In the four most competitive private specialties – IVF (fertility), Obstetrics and Gynecology, orthopedics, and Pediatrics, there are only an estimated 225 doctors in the private sector.

In the Sabah Al Salem area, there are seven private clinics under construction right now. The IMC is an 8 floor building with two clinics per floor that has been rented completely. There are two 10-floor constructions being built by two different entities, both of which are currently unnamed. One of them is to have four clinics per floor while the other will have two clinics in each floor. The Mazaya Holding Company is building two clinics in the area. One is a 15-floor construction with one basement floor while the other is an 18-floor building with two basement floors. There is a new hospital named Safat American being built in Sabah Al Salam and the Taiba Hospital is also building an extension to their main building.

There are four private clinics coming up in Bneid Al Gar. One of them is an unnamed 25-floor building with three clinics on each floor. There is the Mallorca Medical Center being built which is to have 16 floors excluding two basement floors. There are two more yet to be named projects – one is a 7-floor construction with four clinics in each floor, and the other a 21-floor building with two basement floors which will an entire floor to one clinic.

In Shaab, there are two private clinics under construction at the moment. One is a 21-floor building with one basement floor, there is no fixed number of clinics per floor in this project as it provides the option to have either one entire floor or share it with one or two other clinics. The other is an unnamed clinic with 14 floors, dedicating two clinics to each floor.

There are two main private clinics being built in Kuwait City right now, one in Sharq and the other at the Dasman roundabout. The Cleveland Clinic is being built in Sharq right now with 15 floors, dedicating one clinic to each floor. There is a yet to be named project in Dasman which is to have 15 floors and will have four clinics on each floor.

In Salmiya, a 16-floor B Clinic is being built which is to have one clinic per floor. In addition, there is the 15-floor clinic called Aviash under construction as well which will also have one clinic per floor.

The Dar Al Shifa hospital in Hawally is also building two L-shaped extensions to its main building. One of them is to serve as the doctors' housing while the other part has been designated for the hospital's growth.

There is also an unnamed project being planned in Jabriya, which is to have 14 floors.

In the private sector, the average growth rate per annum with respect to Kuwaiti physicians was 4.55% compared to 3.81% for Non-Kuwait physicians. However, given that the demand for Kuwaiti physicians is high, this growth rate will still be unable to meet the demand. This unmet demand is also true for dental care, although the number of Kuwaiti dentists has outpaced non-Kuwaiti dentists. The average growth rate per annum with respect to Kuwaiti dentists was 6% compared to 3% for Non-Kuwaiti dentists. It is expected that the disparity between supply and demand is expected to decline from 53% in 2005 to 12% in 2020.

Thirty-Two Health Centers to be opened in Kuwait in 2019/2020

The Ministry of Health is planning to open thirty-two health centers over the next two years as a part of the ministry's future projects. These health centers will include new as well as renovated constructions and will be staffed by 2,611 medical, technical, and administrative staff including 313 physicians, 179 pharmacists, 145 technicians, and 134 nurses. A few locations of the 32 health centers are: Sabah Al Ahmad; Al Wafra; Al Rehab; Suliabikhat; Jaber Al Ahmad; Al Fannaitis, Abu Fatirah; Salwa. The clinics that are to be demolished and reconstructed are: Fahaheel, Sabah Al Ahmad; Al Dasma Area; Al Qurain; Al Fintas.

Kuwait Medical Device market to grow from 2017 to 2022

The medical device market in Kuwait is expected to register a moderate growth of 11% CAGR driven by the demands of the private sector, rise in prevalence of chronic diseases and the investment in healthcare infrastructure in the country. One of the biggest product segments to see a rise in demand will be the diagnostic imaging services.

New process in Place for the Validation of Expat Medical Certificates

The Ministry of Health has approved EPIC, a US-based electronic certificate portfolio which provides accreditation to medical certificates of Foreign Medical Graduates in the US, to check and verify the certificates of doctors in Kuwait. This step was taken to reduce the possibility of hiring someone on the basis of false credentials keeping in pace with the burgeoning Kuwaiti healthcare market.

Amendments Added to the Mental Health Bill

The Mental Health Bill is being amended to protect mental health patients and other individuals from being exploited and other forms of legal abuse. The changes include the prohibition of any individual for mental healthcare without the consent of a first degree relative and an official medical report as well as a recommendation. In addition, mental health medication and treatment can only be administered after informing the patient or a first degree relative. It will also be mandatory for doctors to review the medication of mental health patients once a month. The bill also will make it a criminal offence to deliberately misdiagnose a person of a mental health disorder.

Major Updates to Emergency Care in Kuwait

The medical emergency services in Kuwait can be availed from the emergency hotline 112, which forwards the call to the EMS Control Center located in Subhan. The dispatch of ambulance and emergency services are done with the help of the “Regional Ambulance Center” located in each of the six regions of Kuwait.

Since February 2018, Kuwait has 79 new land ambulances which adhere to international standards. The Medical Emergency department has acquired 249 ambulances of the targeted 270 vehicles, opened 71 ambulance centers out of the proposed 100, and appointed 250 paramedics out of 500. The department is aiming to achieve the remaining targets by 2020, which include responding to emergency calls in under eight minutes which is the international standard.

Future Landscape of the Kuwaiti Healthcare System

The healthcare landscape of Kuwait is as dynamic as the political landscape. The Ministry of Health is (at the time of the writing of this report) led by His Excellency **Dr. Bassel Humoud Hamad Al-Sabah** and is supported by his Undersecretary, **Dr. Mustafa Reda**.

The rise of internet of the last few decades has paved the way for digital health – ranging from mobile health, wearable devices, and telemedicine to health information technology over the last decade. The global digital health market is booming at the moment, and the GCC are having their own moment in the sun with numerous digital health start-ups and incubators. Even with the broad scope of digital health, one of the elements unifying it is the electronic health record (EHR). The EHR, as is evident in the name, is a digital record of a patient’s medical history which ideally is shareable across hospitals and different healthcare settings as long as the patient gives permissions. This format shifts the responsibility of controlling patient records from the hospital systems to the individual themselves – which has been shown to be more effective in dispensing care around the world. The hospital information system is another element required to reconcile the paper records of yesteryear to the burgeoning digital health market and patient information. While the Kuwait healthcare market has been expanding its infrastructure, there is also need for an upgrade and expansion of patient record systems in the country. This change will go a long way in preparing the hospital systems for the boom in patient information that is fated to accompany the rise of health applications.

There continues to be a strong need to create an independent healthcare regulatory in Kuwait, which this report will refer to as the **Kuwait Health Authority** that will lead the policy development, licensing, quality assurance and the overseas healthcare functions in Kuwait.

It is hoped that the advent of a new Kuwait Health Authority will help guide the Kuwaiti healthcare system away from segregation of care as currently there are seven government entities involved in building/contracting and operating hospitals in Kuwait including the Kuwait Oil Company, the Ministries of Interior, Defense, Public Works, Health, the **Public Institute for Social Security** and the Amiri Diwan.

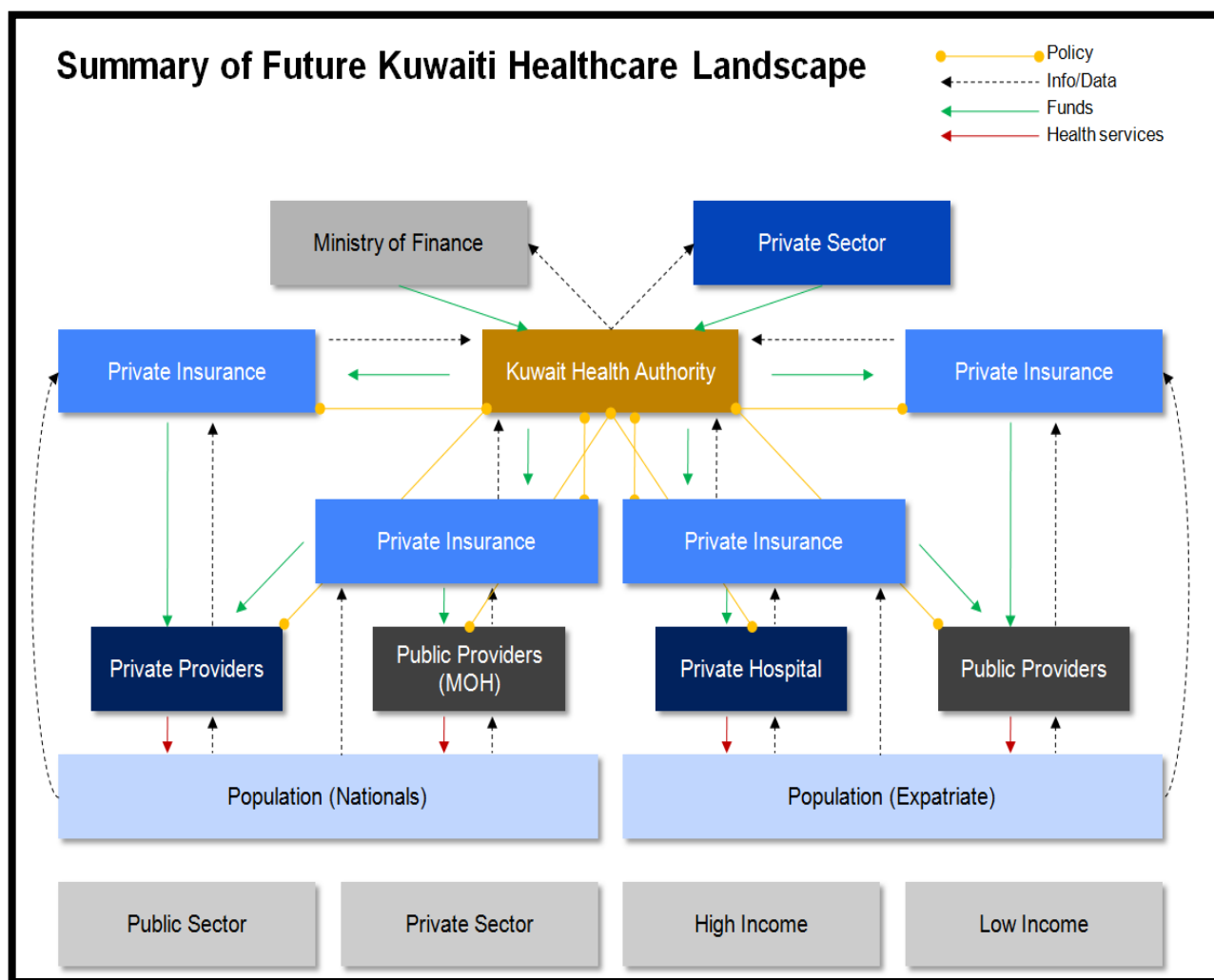


Figure 7: Future Kuwaiti Healthcare Landscape

It is the hope of all stakeholders in the Kuwaiti healthcare system that this new Health Authority will contribute to the stability and structure of the overall healthcare system in Kuwait which will in turn increased the private sectors investment in Kuwaiti healthcare thereby improving the overall quality of healthcare services in Kuwait to benefit the most important stakeholder of the Kuwaiti healthcare system – our benevolent population.

About KLSC:

Kuwait Life Sciences (KLSC) was established in 2010, with a paid-up capital of 18 million Kuwait Dinars (KD) which is equivalent to approximately \$60 million US Dollars. KLSC is fully owned by National Technology Enterprises Company. National Technology Enterprises Company (NTEC) was incorporated in November of 2002, by the Kuwait Council of Ministers as a fully owned company by the Kuwait Investment Authority (KIA), the sovereign wealth fund of the State of Kuwait. Capitalized at 100 million Kuwait Dinars (KD) which is equivalent to approximately \$350 million US Dollars, NTEC aims to play a vital role in servicing major stakeholders in Kuwait and the Middle East region with their technology requirements.

About the Authors:

Dr. Mussaad M. Al-Razouki

Dr. Mussaad M. Al-Razouki is the current Chief Business Development Officer of Kuwait Life Sciences Company (KLSC) where he is part of a team that manages over 100 million dollars in assets under management including local, regional and international investments on behalf of the Kuwait Investment Authority, the sovereign wealth fund of Kuwait. Dr. Razouki is a regional thought leader within the Middle East life sciences industry and has championed the building of strong pillars of the local life sciences ecosystem including the region's premiere pharmaceutical licensing and distribution platform; NewBridge - a 50 mn USD revenue company operating across all 22 MENA countries including Iraq, Iran and Turkey as well as South Africa, Clinart – the region's top Clinical Research Organization (CRO) and host of the first ever Phase II Clinical Trial in the history of Kuwait at the Dasman Diabetes Institute, eCore – the region's top active pharmaceutical ingredients licensor and distributor, the Life Sciences Academy – the region's first ever training and development company focused on the healthcare and life sciences industry as well as Innomedics – one of Kuwait's top medical device distribution companies that pioneered the distribution of personalized digital health products in the region.

At KLSC, Dr. Razouki and his team have invested and co-invested with some of the world's top life science venture capital funds including, New Leaf Venture Partners in New York, Wellington Partners in Munich and Kearny Venture Partners and Presidio Partners both of which are based in San Francisco. Notable investment direct and indirect investment include: CRISPR Therapeutics - a leading personalized genomic medicine company based in Cambridge, Massachusetts (NASDAQ: [CRSP](#)), iRhythm Technologies, based in San Francisco, which closed 56% above its listed stock price on the first day of its IPO (NASDAQ: [IRTC](#)), Quanta Fluid Solutions – one of the world's first home hemodialysis manufacturers, Median Technologies – a leading global provider of medical imaging solutions, especially in the field of oncology based in France (EPA: [ALMDT](#)) and SuperSonic Imagine – a leading global provider of medical ultrasound solutions also based in France (EPA: [SSI](#))

Dr. Razouki has over 15 years of experience in venture capital and private equity investment with a focus on healthcare and technology, shifting from an excellence in clinical practice and research to the management and financing of healthcare and education systems. A graduate of **Columbia Business School**, Dr. Razouki is the first ever Arab national to receive an MBA with a focus on Healthcare Management and Finance. An Oral and Maxillofacial surgeon by training, Dr. Razouki has completed clinical rotations at New York Presbyterian Hospital of **Columbia University Medical Center**, Harlem Hospital, **Cleveland University Hospital** of Case Western Reserve University and Mass General Hospital of **Harvard University**. Dr. Razouki graduated with Cum Laude Honors from **Creighton University** with a Bachelors in Biology (Ethology) and TPP (Theology, Philosophy and Political Science).

In 2007, Dr. Razouki joined the world's largest and oldest strategic consulting firms, **Booz Allen Hamilton**, which at the time was operating in over 100 countries across six continents with four billion dollars in revenue. Dr. Razouki had the honor of working with all six GCC Ministers of health and completed health and public sector projects across the GCC, Lebanon and Egypt.

In 2015, Dr. Razouki was the first ever Kuwaiti doctor to complete the “*Reforming of Public Systems: Health, Higher Education and Finance*” Executive Education course at the prestigious Grande École, **Paris Institute of Political Studies** (“Sciences Po”).

Dr. Razouki was also presented with the **Kuwait e-Award** for best eHealth application by His Highness Sheikh Sabah Al Ahmed Al Sabah, the Emir of Kuwait. Dr. Razouki was also selected by **Stanford Medicine** as part of a group of 20 global authors to write a chapter on digital health investing in the upcoming Springer published book: [Digital Health: Scaling Healthcare to the World](#). He is the only author from the Arab World.

During 2015, Dr. Razouki was also an **Industry Expert Board Member** at Al Ayadi Al Baytha Health Company, a 50 mn USD fully owned company of [Al Khabeer Capital](#), which is one of Saudi Arabia's largest and most active private equity investors with over **three billion dollars of assets under management**. Dr. Razouki worked together with the turnaround team at Al Khabeer and the asset's management to unlock unrealized value in one of Saudi Arabia's fastest growing medical services companies.

In 2016, Dr. Razouki was selected by the Abdul Rahman Al Sumait Award Executive Committee to represent the science community in Kuwait and present at the first ever meeting of the committee. The Committee is co-chaired by His Excellency Sheikh Sabah Khalid Al Hamad Al Sabah, Kuwait's Minister of Foreign Affairs and Mr. Bill Gates. At one million USD it is the largest science prize awarded in for scientific achievement in Africa. Dr. Razouki was also nominated as one of the [top five venture capital investors](#) in the Middle East and North Africa by Arabian Business. Dr. Razouki also [won two awards](#) at the seventh annual **Middle East Healthcare Leadership Awards** for both **Middle East Public Private Partnership of the Year** for the Jaber Hospital PPP Sustainable Hospital Project as well as **Healthcare Entrepreneur of the Year**.

In 2016, Dr. Razouki was also selected to participate in the prestigious [World Economic Forum Global Health and Healthcare Community](#) Meeting as part of the [Future Trends in Health Task Force](#) which was Chaired by Dr. Melanie Walker, Advisor to the President of the World Bank, Dr. Jim Young Kim. Dr. Razouki was the only participant from Kuwait and had the honor of having **seven out the 10 final key technological trends and themes** accepted in the final outcome report of the forum.

Dr. Razouki has also been invited to lecture at top universities and events including Cambridge University, Columbia University, Harvard University and the Cleveland Clinic. Dr. Razouki has also spoken at the World Economic Forum on the Middle East (Dead Sea, 2017) and the World Bank: Youth, Technology and Finance Conference in Algiers during 2018.

In 2017, Dr. Razouki was appointed to the Advisory Board of [Popular Science Magazine](#). An outlet for eminent scientists such as Charles Darwin and Thomas Edison's writings and ideas in the 19th century, Popular Science is the most prestigious science magazine in the world and was first launched in 1872.

Dr. Razouki was also appointed by the Kuwait Foundation for the Advancement of Sciences to the Board of Trustees of the [Jaber Al Ahmed Center for Molecular Imaging and Nuclear Medicine](#) (JAC), the MENA region's first center of excellence and Type II facility dedicated to the production of common radiopharmaceuticals for applications in positron emission tomography. Dr. Razouki is also Chairman of the Executive Committee.

In 2018, Dr. Razouki was also recognized as one of the top 100 [Leaders Who Inspire](#) in an inaugural book on Kuwait developed in coordination with the United National Development Program (UNDP). Dr. Razouki also contributed a chapter on *Growth Hacking Healthcare*, as part of the upcoming Spring published book: [Digital Health Entrepreneurship](#).

Dr. Merina Pradhan

Dr. Merina is a Business Development Associate at Kuwait Life Sciences Company. Dr. Merina is a public health professional with experience in clinical medicine and the North American pharmaceutical industry. After completing her medical studies in India, she spent time practicing medicine with corporate hospitals as well as *Medicins sans Frontieres* (Doctors without Borders). She completed her Master's in Public Health from Harvard University in Healthcare Management and Policy with a concentration in Women and Gender Studies. Most recently she was a Pharmacovigilance Scientist with Johnson & Johnson pharmaceuticals.

Dr. Merina aims to be able to bring her diverse background in NGOs, corporate healthcare, and pharmaceutical industry together in public health, especially being able to focus on the healthcare of marginalized groups.