

ROAD TO EXPO 2020

HEALTHCARE IN THE UAE AND SAUDI ARABIA

WHAT'S THE OPPORTUNITY?



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INTRODUCTION

For New Zealand healthcare exporters looking to venture into new markets, few are more exciting right now than the UAE and Saudi Arabia.

The healthcare sectors in both countries are undergoing a rapid transformation thanks to ambitious government plans to make them two of the best and most innovative systems of their kind worldwide.

These ambitions - backed by billions of US dollars of investment - are creating a wealth of opportunity for New Zealand exporters across the sector, including in pharmaceuticals, telehealth, services, health information technology, medical devices, infrastructure and wellness.

To help guide exporters through these opportunities and fast track their entry into each market, New Zealand Trade and Enterprise (NZTE) has developed the Expo Business Leverage Programme (EBLP).

This report is part of that programme, and following its dissemination, New Zealand businesses will have the opportunity to join in-person trips to the region next year through the EBLP as part of Expo 2020 Dubai. There, they will experience the markets first-hand, meet local experts, and make the key connections needed to expand into the growing healthcare space.

Throughout this report, we will explore the size and structure of each market, the key areas of growth in both, the differences between them, and the unique giga-projects - like Saudi Arabia's new city NEOM and the UAE's medical cities - that make these markets unlike any other in the world.



HEALTHCARE ECOSYSTEMS

Healthcare is a key priority for the governments of the UAE and Saudi Arabia, in part to address the changing needs of their populations – including the rise in non-communicable diseases like diabetes, and cancer.

Since the discovery of petroleum in Saudi Arabia in 1938, and 20 years later in the UAE, both countries have developed into modern states with a high standard of living. Currently, about 50% of Saudi Arabia's GDP comes from oil and gas¹, compared with 30% in the UAE².

As the world moves away from fossil fuels and towards more renewable energy sources, both countries have sought to shift their heavy reliance on oil to more sustainable revenue streams, including by building world-class healthcare systems that will attract investors, providers, manufacturers and medical tourists from around the globe.

The visions for these systems are ambitious: entire cities devoted to health and well-being; futuristic facilities; an increase in remote care; and world-class research centres, all using the latest technology and artificial intelligence to offer unparalleled treatment and services. Expats from developed countries and Saudi and Emirati nationals all expect first-rate standards of care and want to be able to access specialist care without returning home or travelling abroad, as they often needed to do in the 90s and early 2000s, when Gulf Cooperation Council (GCC) countries lacked expertise in certain fields.

In the upcoming sections, we'll explore each country's healthcare system, from their inception through to where they stand today.



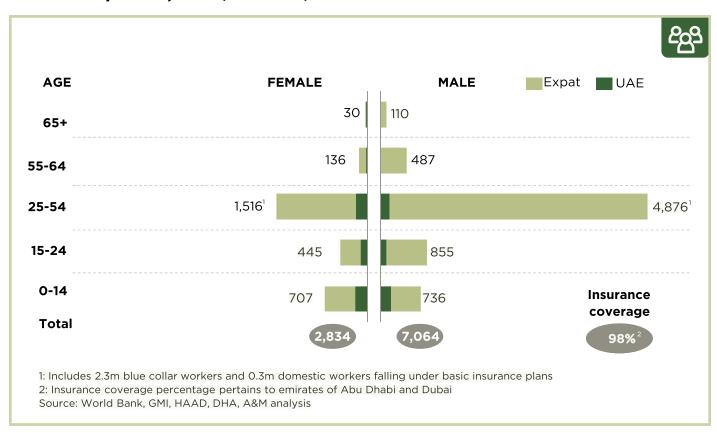
HEALTHCARE IN THE UAE

The UAE's healthcare system has come a long way since its early days nearly 80 years ago. In 1943, the country's first healthcare centre was opened in Dubai, followed by its first hospital in the early 1950s. Nearly two decades later, the Ministry of Health was established. Today, healthcare in the UAE has evolved into a well-established network of players and services, with a system offering free healthcare to all UAE citizens, as well as private options for citizens and foreign residents.

Let's delve deeper into the demographics of the country, the infrastructure of its healthcare system, and its most prevalent health issues.

Demographics

Total UAE Population, 2020 (thousands)



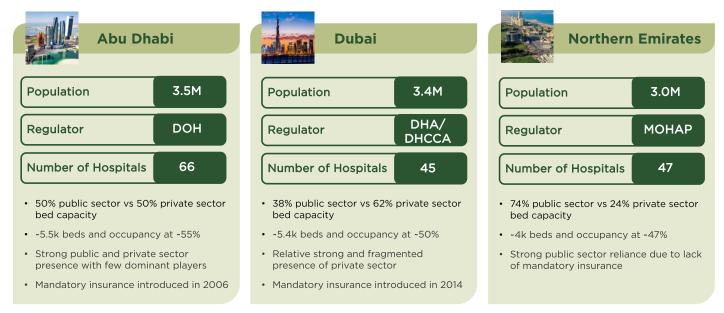
With 10 million inhabitants, the UAE has the second-highest population in the GCC after Saudi Arabia. Unlike other countries in the region, the vast majority of the UAE's population (90%) is comprised of expats. More than 85% of inhabitants lives in urban areas, and 98% of those reside in the two largest emirates (Dubai and Abu Dhabi), where medical insurance coverage is mandatory.

The UAE also has one of the highest male-to-female ratios in the world (71% of the population is male). The median age is 33 years, and the life expectancy is 78 years.

The number of elderly people in the country is rising, an issue that is expected to have a significant impact on the healthcare system as the needs of aging inhabitants grow. Although only 1.4% of the population is currently aged 65 years or older, this figure is expected to increase to 4.4% by 2030³. In addition, the government is taking steps to loosen restrictions for retirement visas, which will attract more retirees to the UAE in the years to come.

Healthcare infrastructure

Overview of Healthcare Providers



Source: Benhameurlaine, K. Ruiz, S. Nahlus, R. (2021) UAE Health Sector Pulse. Alvarez & Marsal.

Although the UAE intends to expand its healthcare system, the current infrastructure is relatively robust, with 158 hospitals and 15,000 beds across the country⁴. Over the past ten years, the number of hospitals has grown steadily – by 6.2% – and, while the split between public and private hospitals varies by emirate, Abu Dhabi and Dubai have the largest number of private hospitals⁵. Overall, the bed capacity in the public sector is higher than in the private sector, and the steady increase in the number of hospitals has led to a competitive healthcare provider market. The ratio of physicians per 10,000 people is 25.3, compared with 26.04 in the US⁶.



Epidemiological backdrop

Demographic shifts are driving the growth of the UAE healthcare system, as the population slowly begins to age and the incidence of chronic diseases – many of which are the result of unhealthy lifestyle choices – increases. The population's widespread use of tobacco, poor nutritional habits and limited exercise has fuelled the rise of cardiovascular diseases, cancer and diabetes in recent years; the UAE has one of the world's highest rates of obesity and diabetes, among others, and allergies and asthma are common.

While federal and emirate-level governments are investing in a number of educational and awareness programmes to bring about lifestyle changes, the prevalence of these diseases remains high.

Diabetes

The UAE is lagging behind in diabetes care, despite having one of the world's highest rates of the disease at 16.3%, according to the International Diabetes Federation. If present trends continue, it is estimated that 15.4% of the UAE adult population may have diabetes or prediabetes over the next ten years⁷. A diabetes register has been established to assist with the UAE's national agenda of reducing the prevalence of this disease.

Cardiovascular disease and hypertension

Cardiovascular disease remains the leading cause of death in the UAE, accounting for two-thirds of all deaths. In 2018, around 30% of Emiratis had high blood pressure⁸. The condition is particularly high among citizens between the ages of 30 and 50 and is more prevalent among females (54%). Between 8,000 and 10,000 people suffer a stroke every year⁹. Half of UAE stroke patients are under the age of 45.

Obesity

Nearly half of the UAE population has a body mass index (BMI) of between 25 and 30, which places them in the overweight range; around 30% are obese, with a BMI over 30¹⁰. The obesity rate in the UAE is double the world average¹¹, and the UAE government has instigated health and educational awareness campaigns to help reduce the problem.

Cancer

The third cause of death in the UAE is cancer¹², with breast cancer, colorectal cancer and leukaemia being the most common. Many cancers that are prevalent in the UAE can also be attributed to high tobacco consumption and obesity. The UAE government has implemented more stringent rules around smoking inside restaurants and raised the cost of tobacco, although it is still significantly cheaper than in many Western countries. Historical data shows that the smoking rate for ages 15+ was 20% in 2007 and fell only marginally to 18% by 2019.

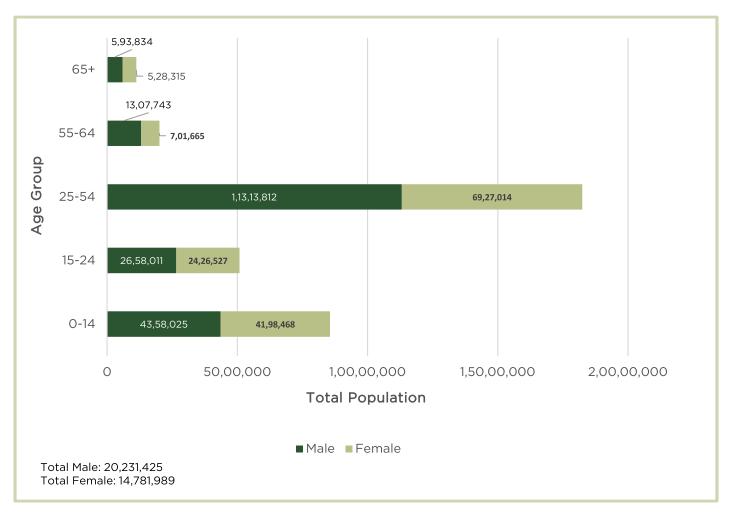
HEALTHCARE IN SAUDI ARABIA

Saudi Arabia has a long history of providing healthcare, partly because it is home to Islamic holy pilgrimage sites to which millions of Muslims from around the world flock each year. These mass events have required significant preventative and responsive measures from the kingdom's healthcare system to ensure the safety of the pilgrims. This includes managing issues associated with mass gatherings, such as the potential spread of diseases¹³.

Modern healthcare in the country was established by royal decree in the holy city of Mecca in 1925, and a quarter of a century later, the Ministry of Health was established. Today, Saudi Arabia offers free healthcare to all its citizens, alongside private healthcare options.

Demographics

Total KSA Population, 2020



Source: Population by age groups and gender, General Authority for Statistics, Kingdom of Saudi Arabia

Saudi Arabia is the most populous country in the GCC, with 35 million people - the population is expected to grow to 39 million by 2030. The median age is 32 years, with an average life expectancy of 76 years. Saudi nationals make up 61.2% of the population.

The size of the elderly population is growing, with the number of people aged 60 and older expected to more than double by 2030, from 1.8 million (5.5%) to 4.9 million (11.1%). This will affect the healthcare system as more people require geriatric services like long-term care and rehabilitation¹⁴.

Healthcare infrastructure

There are 504 hospitals in Saudi Arabia, with nearly 78,600 hospital beds - an increase of around 11% since 2016. More opportunities for the private sector will emerge over the next few years, as estimates suggest that nearly 20,000 additional beds will be needed by 2035.

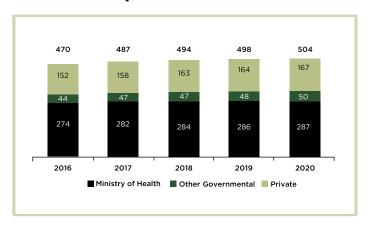
In 2019, the highest number of private hospital beds was in the capital Riyadh (25%), followed by Jeddah (24%)¹⁵, with the overall market share of private hospitals in Saudi Arabia expected to reach 30% in the next ten years. By 2030, 295 hospitals and 2,259 healthcare centres are expected to be privatised.

Number of Beds

70.844 72.981 75.225 76.988 78.596 19.427 19,146 18,883 17.622 17 428 13,989 41,835 43.080 43,680 44,665 45,180 2016 2019 2020 2017 2018 Ministry of Health Other Governmental Private

Source: Kingdom of Saudi Arabia, Ministry of Health Portal

Number of Hospitals





Epidemiological backdrop

Along with the goal of increasing the population's life expectancy, one of the major drivers of healthcare expenditure in Saudi Arabia is the need to combat non-communicable diseases linked to poor lifestyle choices¹⁶.

Obesity and hypertension

Over the past 20 years, Saudi Arabia has undergone major socio-economic developments leading to significant changes in dietary habits and social practices, some of which have negatively affected people's health. A national study in 2014 found that 33.5% of females and 24.1% of males in the Kingdom were obese. A quarter of the population has hypertension, and more than half of them are unaware that they have the disease. It is estimated that, by 2025, nearly half of the population will have hypertension.

Diabetes

Saudi Arabia ranks seventh in the world for age-adjusted prevalence of diabetes, with 18.3% of adults suffering from it. The World Health Organisation says the kingdom has the second-highest rate of diabetes in the Middle East. The number of diabetics is expected to increase by 283% by 2030. The Ministry of Health has launched a new programme to train health officials in treating diabetic patients through insulin pump therapy and has distributed 500,000 glucometers in the past 18 months as part of a three-year programme to monitor and tackle the growing rate of diabetes in the country.

Cancer

In 2018, Saudi Arabia had more than 24,400 cases of cancer. Breast cancer is the most prevalent form and accounts for nearly 30% of all new cancer cases in women, with 12,000 females diagnosed with the disease every year. Several specialty centres are in place to address the growing number of cancer cases in the kingdom, including The Oncology Centre – which offers holistic care to adult patients with solid tumours, gynaecologic malignancies, and malignant lymphomas – and the King Abdullah Cancer and Liver Disease Centre.

Infectious diseases

Various infectious diseases, such as tuberculosis, malaria, hepatitis, and HIV, are also prevalent in the country.





GOVERNMENT VISIONS AND INVESTMENT IN HEALTHCARE



Billions of dollars are being invested in healthcare across the GCC. There are currently around 160 healthcare projects being developed throughout the region, with a total value of USD 53.2bn¹⁷.

In Saudi Arabia, healthcare spending rose at an annualised estimated average of 3.9% between 2012 and 2017, with USD 35.9bn spent in 2017. The kingdom makes up more than 56% of the GCC market.

Apart from Oman, the average per capita expenditure on healthcare between 2015 and 2019 across all GCC countries was above the global average. GCC countries spend 2-4% of their GDP on healthcare. The US, by comparison, spends 17-18% of its GDP on it. The global average as a percentage of GDP is 9.88%.

Countrywide Current Health Expenditure (CHE)

Healthcare Expenditure, Average of 2015-2019

Coutntry	GDP per capita on health in \$	Goverment contribution to total healthcare expenditure
KSA	1,095	66%
UAE	1,358	71%
Bahrain	1,120	58%
Oman	590	88%
Qatar	1,650	80%
Kuwait	1,530	88%
World	1,061	60%

Source: https://countryeconomy.com/government/expenditure/health/

UAE's Vision 2021 and 2071

The UAE has the ambitious goal of becoming the best country in the world and recognises that its population must be fit and healthy to achieve this. In 2014, the country launched its Vision 2021 strategy (extended until 2022 due to COVID-19), with the aim of building a world-class healthcare system. Its key objectives include:

- · Having all hospitals accredited according to national and international quality standards
- Reducing cancer and diseases like diabetes and cardiovascular disease
- · Reducing the prevalence of smoking
- Increasing the healthcare system's readiness to deal with epidemics
- Increasing the number of physicians and nurses per 1,000 people¹⁸

While Vision 2021 is still underway, the government has reaffirmed its commitment to the healthcare sector in its recently launched Vision 2071 plan. In addition to previous goals, Vision 2071 will also focus on efforts to improve access to healthcare through e-health and smart health, and to become a top destination for medical tourism¹⁹.

Within these goals there are specific aims to modernise and advance the current healthcare system, including:

- Using AI to minimise chronic and dangerous diseases
- Adopting plans and strategies in the field of genomic medicine
- Developing personalised genome medications for patients
- Promoting medical tourism
- Focusing on robotic healthcare
- Enhancing telemedicine services
- Providing smart medical solutions 24/7
- Encouraging neuroscience research

In order to achieve the aims of both Visions, the UAE government is underpinning its efforts with significant investments. For example, in late 2020, USD 1.3bn (6.89% of the total budget) was allocated to healthcare spending for 2021. There has also been significant private investment in healthcare facilities and services.

Saudi Arabia's Vision 2030



The Ministry of Health is estimated to have spent nearly USD 71bn on healthcare by the end of 2020, with a compound annual growth rate (CAGR) of 12.3%, to reach its Vision 2030 goals.

These include:

- Increasing private healthcare spending from 25% to 35% of overall healthcare spending
- · Increasing the number of hospitals that are internationally accredited
- Reducing the prevalence of smoking throughout the country
- Increasing innovations in digital healthcare²¹
- Spending more than USD 66bn on healthcare infrastructure
- Lowering the number of deaths from non-communicable diseases
- Achieving a 3% decrease in obesity and a 10% decrease in diabetes rates²²

There will be a particular focus on privatisation to transform the healthcare system.

The government aims to reduce its own role from provider to regulator, and to increase private participation – a goal boosted by new regulations introduced in 2017. These have allowed foreign businesses to hold up to 100% ownership of companies in the sector, and mandatory health insurance for all expatriates is already in place.

By 2030, the government aims to increase the private sector's contribution to GDP from 40% to 60%, including through the privatisation of one of its medical cities²³.

It also aims to expand public-private partnership (PPP) healthcare delivery models, and to transform digital information systems and IT capabilities with a USD 1.5bn budget²⁴.

Healthcare will get a boost in the country from giga-projects like NEOM – a new futuristic city worth USD 500bn that will span over 10,000 square miles²⁵ and include a HealthTech hub and medical research centres²⁶.

Government initiatives

Accelerators in the UAE

In 2016, the UAE's cabinet launched government accelerators as a new way of boosting the achievement of its Vision 2021 and 2071 goals. These initiatives include:

Dubai Future Foundation

The Dubai Future Foundation's goal is to shape the city's future, particularly in strategic sectors, such as healthcare, with support from both the government and the private sector. It includes accelerator programmes, incubators, labs, regulatory sandboxes, and knowledge platforms. It also has a research arm and capacity building programmes²⁷.

Area 2071

Area 2071 was established as an innovation ecosystem and platform to drive global change through collaboration between the public and private sectors, start-ups, entrepreneurs, and innovators. It enables companies to use 10,000 square feet of workspaces and meeting rooms to support collaboration and inspiration for those working in the shared environment. New Zealand was one of the first to become a country in residence at Area 2071.

Hub 71

Hub 71 is an Abu Dhabi government initiative with programmes that are broadly similar to Area 2071. Launched in 2019, Hub 71 aims to have 100 start-ups within three years across a variety of sectors, including life sciences, cyber security and food supply. Hub 71 is based in the capital city, where all the ministry headquarters are. It enjoys significant support from wealth funds and investors (to the tune of USD 800m), and includes a collaboration with Microsoft, Mubadala – a UAE sovereign investment company –, Abu Dhabi Global Market – an international financial centre – and Japan's Softbank.

Dubai Future Accelerators

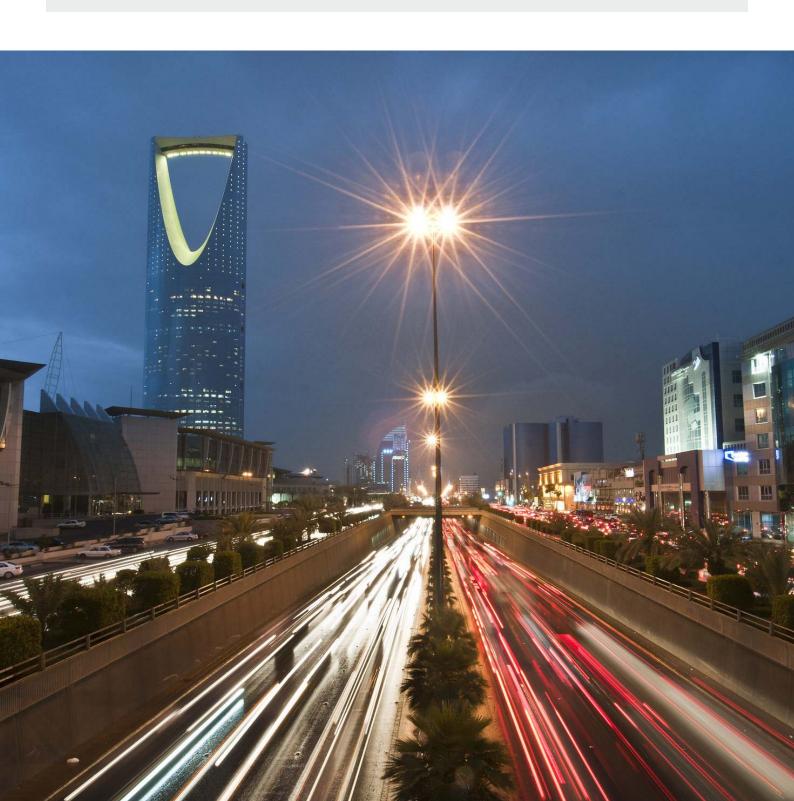
Launched in 2016, Dubai Future Accelerators (DFA) facilitates partnerships between entrepreneurs, private sector organisations and government entities to co-create solutions. Dubai government entities provide a challenge and work collaboratively with chosen companies to tackle the issue and find innovative solutions. Programmes run for six to nine weeks, and participating companies partner with a government agency to prototype a solution. Participants are also introduced to funders, and airfares and accommodation are paid for by the Dubai government

<u>Dubai SME - Ztartup</u>

Dubai SME was established as part of the Department of Economic Development (DED) as a dedicated resource of support for small- and medium-sized businesses. While the initiative itself is not new, in 2021, it announced a new business incubator called Ztartup in Dubai Healthcare City, with two streams: one for entrepreneurs and one for new businesses. The incubator stream will include an evaluation service and help to start and launch businesses, including training, workshops, and network building.

The National Transformation Program in Saudi Arabia

As part of Vision 2030, the Saudi government established the <u>National Transformation</u> <u>Program</u>. The aim of the programme is to develop the necessary infrastructure to promote social development and raise the standard of living through its eight strategic themes, which include transforming healthcare into a comprehensive, effective, and integrated system. As part of this, the programme will seek to improve access to health services, expand e-health and digital healthcare solutions, and improve the quality of services overall²⁸. Vision 2030 plans have already resulted in substantial achievements, such as providing access to emergency services within four hours; this has shot up from 36% before 2016 to 87% currently²⁹.





GROWTH DRIVERS

Aside from changing demographics and a rise in non-communicable diseases, there are other major growth drivers for healthcare in both the UAE and Saudi Arabia.

These include:

Mandatory health insurance

In Dubai and Abu Dhabi, health insurance is mandatory for all residents. While the government provides full medical coverage for Emirati citizens, most residents are insured by their employers, which are required to provide health insurance for their employees. The average cost of health insurance in the country is around USD 2,700 per year in the UAE³⁰.

In Saudi Arabia, all expats living in the country must have health insurance – those who don't will not be granted visas to the country. The implementation of mandatory health insurance (MHI) in the country started in 2016 and was fully in place by 2017. All private sector employers must use a health insurance policy to cover their employees (whether Saudi or non-Saudi), as well as their families. As of 2018, more than 10.8m employees were insured, along with more than 1.7m dependants³¹.

The establishment of basic MHI in Saudi Arabia and parts of the UAE has created a huge scope for local and foreign insurers to tap rising demand.



Strong project pipeline to expand infrastructure

UAE

The UAE government is investing substantially in infrastructure projects to achieve its healthcare transformation goals, and to prepare for the growth of demand in services expected in future. Some of these are³²:

Danat Al Emarat Hospital for Women and Children - Phase 2, Abu Dhabi

An USD 81.6m project to expand the Danat Al Emarat Hospital, including a new tower with 100 hospital beds, three new digital operating rooms, and ten new delivery rooms. The paediatric specialities of the hospital, including paediatric neurology and paediatric pulmonology, will also be expanded as part of the project.

Long-term Care Facility Health Project, Al Mamzar

A nursing home facility in the Seniors' Happiness Centre Complex in Dubai, which will support long-term care patients. The nearly 160,000 square metre facility, owned by Dubai Health Authority, will include 120 beds and a 10,000-seat theatre.

Saudi German Hospital Al Marjan, Ras Al Khaimah

This 100-bed specialty hospital, owned by Middle East Healthcare Company, will be situated on Al Marjan Isand in the emirate of Ras Al Khaimah. It will provide a range of services, including medical, rehabilitation, and cosmetic. Construction is set to begin in 2021³³.

Saudi Arabia

The development of healthcare infrastructure in Saudi Arabia will take on great importance over the next few years and will be backed by substantial investment. Of the USD 66bn that the government plans to spend on healthcare by 2030, around 40-50% is likely to be spent on infrastructure until 2025³⁴. Some of the key projects are:

NEOM

This USD 500bn city will span 10,000 square miles along the Red Sea coast. This giga-project, announced in 2017, has been heralded as one of the world's leading health-tech centres once it is completed, with laboratories specialising in stem-cell therapies, genomics, and nanobiology³⁵.

King Abdullah Bin Abdulaziz Medical Complexes

This mega-project for the security forces is not only Saudi Arabia's largest healthcare project, but the largest in the GCC. Worth USD 6.8bn, it will consist of two separate medical cities in Riyadh and Jeddah spanning 1.1m square metres each. The project will consist of various medical facilities with a total of approximately 3,500 beds across Riyadh and Jeddah³⁶.

King Faisal Medical City

Owned by the Ministry of Health, this 2.2m square metre city will include 1,350 beds, with 500 in the main hospital, and the remaining spread across five specialty hospitals for cardiology, oncology, ophthalmology, neurology, and rehabilitation. It will be completed in two phases and will also include a convention centre and a hotel³⁷.

Increasing importance of public private partnerships

In both the UAE and Saudi Arabia, public-private-partnerships (PPP) are seen as increasingly crucial to improving the quality of healthcare.

The private sector has an important role to play in the UAE's healthcare sector plans, particularly as the government seeks to shrink its role of service provider.

Private sector healthcare spending is forecast to increase at a cumulative annual growth rate of 9.5%, compared to a government contribution growth rate of 4.4%³⁸.

Here are some examples of PPPs in the UAE:

- The Ministry of Health and Prevention (MOHAP): has recently partnered with Janssen, one of Johnson & Johnson's pharmaceutical companies, to improve psychiatric services in the country, as well as to promote the importance of early intervention in addressing mental health issues³⁹. Johnson & Johnson has already worked with MOHAP several times, including in 2016 to screen 10,000 individuals at high risk of diabetes. In 2017, a detection programmes for diabetes in ten UAE healthcare centres was launched through the partnership⁴⁰.
- The UAE has partnered with Cerner Corporation since 2008 on various projects, including in March 2020, when Cerner began work with MOHAP on a programme to keep patients up to date with prescription refills during the COVID-19 pandemic. The company, which designs health information technology, has also worked with the Abu Dhabi Health Services Company (SEHA) and the UAE Armed Forces⁴¹.

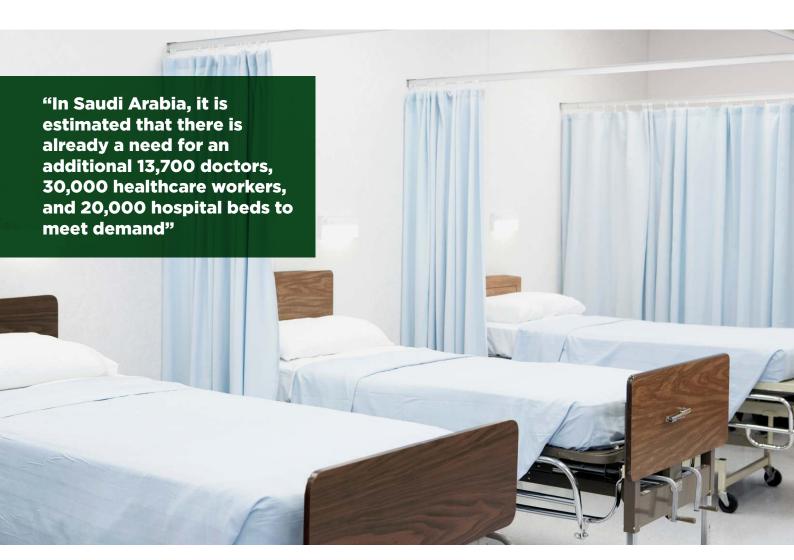
In Saudi Arabia, the new private sector participation law (the PSP Law) was designed to boost private investment in the kingdom and bolster the Saudi economy. The law is the beginning of the legal framework on which the Saudi government can start to outsource healthcare provision and will cover PPPs⁴². Here are some examples of PPPs in Saudi Arabia:

- Multinational technology firm Royal Philips joined forces with Saudi Arabia's Ministry of Health in 2019 to provide an integrated cardiovascular information system (CVIS) in facilities across Mecca, Jeddah, Al Hafouf, Qaseem, Jizan, Najran, Dammam and Arar. The venture, called Taji Project, aims to improve access to care, in part by making medical information available to patients on demand, and will be managed by a network of specialists⁴³.
- General Electric (GE) has teamed up with the Saudi Ministry of Health to effect a digital transformation of the country's healthcare sector. This will include a cloud-based electronic medical record (EMR) system using GE's Predix platform, where a patient's entire medical journey can be accessed by patients and medical staff⁴⁴.

Shortage of medical professionals

With growing and ageing populations, both the UAE and Saudi Arabia are expected to experience a shortage of medical professionals in the coming years, something that is likely to fuel opportunities for private sector and foreign providers.

In the UAE, it is expected that Dubai alone will need an additional 8,300 physicians and 8,800 nurses by 2025. Part of the UAE's healthcare vision is to increase the number of medical professionals across the country and overcome certain challenges, such as a shortage of medically skilled nationals, difficulties in recruiting physicians and nurses to more remote areas, and a high turnover of expat staff. To help mitigate these issues, the UAE announced plans to extend its ten-year golden visa system to all doctors, PhD holders, and highly skilled workers⁴⁵.



One of the challenges here will be an increase in mental health issues among healthcare workers, including stress, anxiety, and depression⁴⁶. In addition, the government's Saudisation programme – which aims to increase the number of Saudi nationals in the workforce – will see an increase in the hiring of Saudi national doctors and nurses, which will in turn drive demand for medical education facilities and training.

Demand for specialised care, rehabilitation, and long-term care

As the UAE and Saudi Arabia's demographics shift and the incidence of lifestyle diseases rises, healthcare consumption is growing across the region, and so too is the demand for specialised services – from maternity and paediatrics to cosmetic surgery, as well as treatments for lifestyle diseases.

Day surgeries, where patients can be treated outside of traditional hospitals and need not stay overnight, are becoming more popular across the region, including for specialties like urology and gastroenterology.

In Saudi Arabia, the rise in daycare centres continues for the treatment of lifestyle diseases, such as diabetes, strokes, and obesity, which don't require treatment in traditional hospitals. The kingdom is also seeing a rise in demand for specialty services like ophthalmology, IVF, and cosmetic surgery⁴⁷.

While the move to specialty services continues, there are opportunities for growth and expansion as the health authorities struggle to meet demand, and as gaps in services result in a rise in costly outbound medical tourism. In the UAE, the Dubai Health Authority spent more than USD 90m in 2018 to send 1,207 patients abroad for a number of treatments, including oncology, orthopaedic surgery, ophthalmology, and neurosurgeries.

Alongside the growing demand for local specialised services, we are also seeing a rise in demand for long-term care (LTC) provision and rehabilitation services. The aging populations in the UAE and Saudi Arabia are a huge driver behind this increase, as more people require geriatric care, rehabilitation, and home care services. Costs are also a driver: in Saudi Arabia, for instance, home care for patients can cost less than USD 80 a day, compared with USD 533 per day for a hospital bed.

In the UAE, free home healthcare services are available for eligible citizens, including medical care, rehabilitation, dental, optical, dermatological and diabetes treatments, and preventive care. There are also a growing number of treatment centres for LTC and rehabilitation in both countries⁴⁸. In Riyadh (Saudi Arabia), the Medical City for Rehabilitation and Treatment is a USD 346.6m project that will span 1.2m square metres, include 1,100 beds, and provide specialised treatment and therapy for patients with physical disabilities. The project, which is expected to serve more than 170,000 patients a year, will also include a hotel, tourist villas, a commercial mall, and gyms⁴⁹.



Medical Tourism

Inbound medical tourism in the UAE has been growing steadily in recent years, with visitors seeking treatment ranging from major surgeries to rehabilitation to cosmetic corrections. According to the latest Medical Tourism Index Ranking, Dubai and Abu Dhabi were ranked the 6th and 8th best global destinations for medical tourism, respectively, in 2021. In 2016, Dubai attracted nearly 327,000 medical tourists, an increase of approximately 9.5% on the year prior⁵⁰. Dubai's aim was to attract 500,000 health tourists by 2021, and it was well on the way to reaching this target in 2019, with just under 400,000 medical tourists. Medical tourism specialties in the country include orthopaedics and sports medicine, plastic surgery, ophthalmology, dental procedures, dermatology and skincare, aesthetic surgery, preventive health and wellness⁵¹. The UAE's medical tourism industry is expected to be worth USD 5.2bn by 2023⁵².

While Saudi Arabia's medical tourism sector is not as advanced as the one in the UAE, the government is making efforts to stimulate its growth. A five-year plan is under development to attract medical tourists from other Islamic countries, and to encourage nationals to seek treatment within the kingdom. The country is also seeking to combine its substantial religious tourism sector with medical tourism, with the Saudi Commission for Tourism and National Heritage endorsing a proposal to promote its healthcare services to the scores of pilgrims visiting the country each year⁵³. This could include various types of treatments being packaged with religious tourism for trips to holy sites, as well as offering treatment to elderly patients with medical issues or terminal diseases who want to spend time at the holy sites they feel spiritually connected to⁵⁴. There is already robust infrastructure in place to strengthen the link between medical and religious tourism, with 25 hospitals and 158 health clinics currently located across the holy cities⁵⁵.





HEALTHCARE STRUCTURE

Regulatory framework - UAE

The Ministry of Health and Prevention is responsible for all requirements regarding the importing and supplying of medical products and services including devices, pharmaceuticals, the registration of health and medical companies and practitioners, as well as licensing and approving all health and medical related advertising.

Medical devices, supplies and pharmaceuticals: All medical and health companies must be registered with the Ministry of Health and Prevention, including drug and pharmaceutical companies. Once they have been approved by the ministry, they must apply with Dubai Municipality for permission to import.

Free zones - UAE

Special free zones across the UAE offer a range of benefits for businesses that choose to locate there, including special tax and customs and import regimes. They also provide a wide range of business infrastructure and services to tenants. Dubai's free zones include:

Dubai Healthcare City: The Dubai Healthcare City (DHCC) free zone was established in 2002 and brings together core healthcare services. A range of internationally recognised entities are well-established here, including many well-known pharmaceutical companies, such as AstraZeneca, Boehringer Ingelheim, Johnson & Johnson, Novartis and Julphar. DHCC is governed by <u>Dubai Healthcare City Authority (DHCA)</u>, has its own regulatory body and facilitates end-to-end business set-up⁵⁶.

Dubai Science Park: Dubai Science Park is an innovation science hub and part of the TECOM Group, which comprises over 350 companies, including Bayer, Medtronic, Merck Serono. Its vision is to foster development in the med-tech, wellness and pharmaceutical sectors. Over 350 companies have a presence at Dubai Science Park, including Bayer, Medtronic, Merck Serono⁵⁷.

Jebel Ali Free Zone: Jebel Ali Free Zone (JAFZA) is home to 162 healthcare and pharmaceutical companies from over 40 countries; it accounts for 38% of Dubai's total healthcare and pharmaceutical trade by volume and over 30% by value. The likes of GlaxoSmithKline (GSK), Roche and Sanofi are all based at JAFZA⁵⁸.

Regulatory framework - Saudi Arabia

Healthcare in Saudi Arabia is governed by The Ministry of Health (MoH), the Saudi Commission for Health Specialties, the Saudi Food and Drug Authority (SFDA), the Saudi Arabian General Investment Authority and the Bureau of Investigation and Prosecution. 59

Pharmaceuticals: The SFDA is responsible for licencing pharmaceutical products and manufacturing facilities. The registration process for pharmaceutical companies takes between 6 and 18 months to complete, though the time limit for approval has been decreasing steadily.

Medical devices: The SFDA regulates medical devices and in-vitro diagnostic (IVDs) products sold and distributed in Saudi Arabia. A Medical Device Marketing Authorization (MDMA) approval from the SFDA is required before placing a product on the market for most of medical devices.

Intellectual property rights: Patent and trademark registration in Saudi Arabia is granted on a first-to-file basis. The country belongs to several bodies associated with intellectual property rights, including the Berne Copyright and Paris Industrial Property Conventions, and the World Trade Organization.

Special economic zones - Saudi Arabia

Special economic zones across the country were developed to create employment, attract investment, and diversify the economy. Saudi Arabia's special economic zones include:

NEOM Economic Zone: Designed to be the world's first independent international zone, NEOM will have its own judicial system, independent of the kingdom's governmental framework, except for sovereign laws. It will be developed along the Red Sea coast⁶⁰.

King Abdullah Economic City: Situated between Mecca and Medina and the commercial hub of Jeddah, this USD 100bn project is the largest infrastructure project in Saudi Arabia, and the world's largest privately funded city development⁶¹.

The Knowledge Economic City: Announced in 2006, this USD 7bn city is situated in Medina and is intended to be a regional hub for the knowledge and information market⁶².

Prince Abdulaziz bin Mousaed Economic City: This USD 8bn project was designed to make the north-western city of Ha'il a major economic centre and entertainment hub and to create 30,000 jobs for young people⁶³.

Jazan Economic City: Jazan Economic City is designed to be an all-inclusive city. It will span 100m square miles and focus on energy, agriculture, and labour-intensive industries⁶⁴. It will have its own desalination plant and a power plant generating 4,000 MW of electricity⁶⁵.



FUTURE OPPORTUNITIES

There are several sectors across the UAE and Saudi Arabia that are ripe with opportunity for exporters looking to expand into these markets.

The UAE

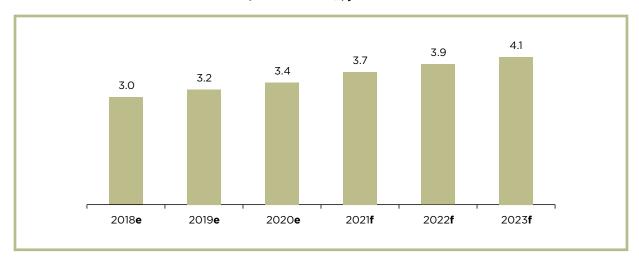
Medical device market: The medical device market in the UAE is forecast to be worth USD 1.5bn by 2025, with a CAGR of 4.4% between 2020 and 2025. The drivers behind this upward trend are population growth, the changing healthcare needs of the country, healthcare infrastructure developments, and expanding health insurance. The market includes tools for diagnosis, prevention, and monitoring or treating illnesses, including diagnostic imaging, aids, and prosthetic products⁶⁶. The UAE currently relies heavily on imported medical devices, which drives up the costs of establishing healthcare facilities. To counterbalance this, some suppliers offer medical equipment on long-term leases or through equity investments⁶⁷.

Healthcare IT: Like all countries across the GCC, the UAE is looking to advance its healthcare IT capabilities, particularly in response to the COVID 19-pandemic. This includes the use of contact tracing systems, hotspot identifiers, and online disease surveillance. Research by Ernst & Young shows that more than half of healthcare operators across the country plan to up their investment in health technology in the next three years after seeing its value during the pandemic: more than 80% of operators saw an increase in staff productivity thanks to digital technologies⁶⁸.

Beyond COVID-19, healthcare IT will also be used to help healthcare professionals make decisions regarding patients and services, as well as to improve data privacy, manage transactions, and deliver training remotely⁶⁹. Healthcare IT is also being used to streamline information and make it more readily available. In Abu Dhabi, for example, the healthcare authorities are implementing an electronic medical record system across 14 hospitals and 65 clinics, which will make patient data more easily accessible⁷⁰.

Pharmaceuticals: The UAE is the second-largest pharmaceutical market in the GCC region, with an estimated worth of USD 3bn in 2018. This is expected to reach USD 4.1bn by 2023, with a CAGR of 6%. This growth is driven by the growing population, free trade zones, the growing size of personal disposable incomes, and the incorporation of international standards in home healthcare policies⁷¹. Health-related free zones can include hospitals, specialised clinics, and medical training centres. Several zones have become hubs for the pharmaceutical industry, including for AstraZeneca, Pfizer, Novartis, and Bayer⁷².

UAE Pharmaceutical Market (billion US\$), 2018-2023



Source: RNCOS (2020) UAE Healthcare Sector Outlook 2023. Edition 4.0

Note: e/f = RNCOS Estimation/Forecast

Tele-health: The tele-health market in the UAE is expected to grow substantially in the next few years. Forecasts show that it could be worth USD 536.5m by 2025, up from USD 121m in 2019, at a significant CAGR of 28.2%⁷³. There are several initiatives across the country promoting the use of tele-health services, including:

- The International Telemedicine Service launched by the Ministry of Health and Prevention last year. This service is designed to help patients and doctors get second opinions remotely for critical health conditions.
- The Dubai Health Authority's Doctor for Every Citizen app, where patients can get free medical consultations through voice and video calls.
- Abu Dhabi's Department of Health RemoteCare app, which can examine symptoms, diagnose non-emergency cases, book appointments, and consult with doctors over voice or video calls or text messages⁷⁴.

Saudi Arabia

Medical device market: The medical device market in Saudi Arabia is growing stronger as awareness around health issues grows, and more healthcare services are consumed ⁷⁵. The market is estimated to be worth more than USD 2bn and is anticipated to grow at a CAGR of around 8% in 2018-2024 to reach a value of around USD 3.6bn. Recent initiatives have also given the sector a boost, including the Medical Device Interim Regulations, which regulate the market across the country⁷⁶.

The majority of medical devices are imported, with a strong demand for: needles, syringes and catheters; general medical and surgical equipment; electro medical equipment; and medical Xray equipment.

The most prominent segments of the market are:

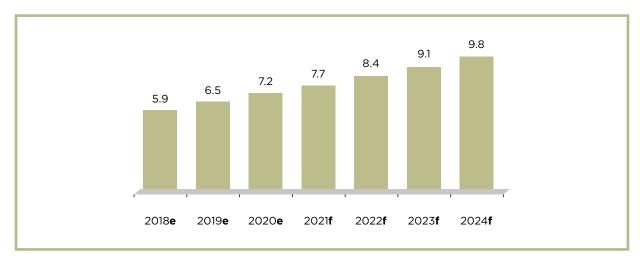
- In-vitro diagnostics, which were worth USD 601m in 2019. Saudi Arabia is the largest market for in-vitro diagnostics in the GCC.
- Point-of-care (POC) diagnostics, which involve tests conducted near the site of patient care, including glucometers, pregnancy tests, blood cholesterol tests, and urine analysis strips
- Diagnostic imaging, which is influenced by the rise of chronic diseases and the increasing elderly population, among other factors. It is expected to grow at a CAGR of 4.6% in 2020-2025
- Ophthalmic devices are a key growth area in Saudi Arabia due to a high prevalence of eye diseases, particularly among elderly people, and people with diabetes and high blood pressure.

Manufacturers who want to enter the market first need authorisation from the SFDA.

Pharmaceuticals: Saudi Arabia accounts for 59% of the purchases of pharmaceutical products in the GCC and will remain a key market for many leading multinational pharmaceutical companies in the Near East. The Saudi pharmaceutical market is the largest market in the Middle East and Africa region with an estimated worth of USD 6bn in 2018. It is expected reach just under USD 10bn by 2024. The kingdom's plans to open the healthcare sector to privatisation are expected to give impetus to pharmaceutical and biotechnology research and development firms and create a competitive and high-quality healthcare sector.

In terms of exports, Saudi Arabia is currently the largest producer of pharmaceutical products in the Middle East and supplies about 50% of the GCC. Out of the region's estimated 50 recognised pharmaceutical manufacturers, approximately 30 are based in Saudi Arabia.

KSA Pharmaceutical Market (billion US\$), 2018-2024



Source: RNCOS (2020) KSA Healthcare Sector Outlook 2023. Edition 4.0

Note: e/f = RNCOS Estimation/Forecast

Mobile solutions: The emergence of mobile health solutions is one of the major new trends in Saudi Arabia's healthcare market, driven by the healthcare sector's rapid adoption of technology, such as smartphones and tablets, to increase operational effectiveness. This is reflected in substantial investments in cloud, mobility, virtualisation, telemedicine, and remote patient monitoring.

mHealth, the national mobile health-tech company (and a sub-segment of the national eHealth strategy) is deploying information and communication technology (ICT), such as computers, mobile phones, communications satellites, and patient monitors, to provide health services and information.

Some of the most common uses of mobile health are the collection of community and clinical health data, the delivery of healthcare information to practitioners, researchers, and patients, real-time monitoring of patients' vital signs, and direct provision of care (via mobile telemedicine).

Trends in E-Health: As with mobile health, the Saudi government is forging ahead with number of digitisation initiatives to make healthcare spending in the country more efficient.

The eHealth National Strategy strives to improve healthcare services by providing better patient care, establishing effective connectivity between all hospitals, linking them to a national database, facilitating patient referrals, and promoting a performance measurement programme.

eHealth consists of a range of services or systems including:

- Health knowledge management
- Virtual healthcare teams
- Medical research using grids
- Electronic health records
- Computerised physician order entry
- Telemedicine
- e-Prescribing

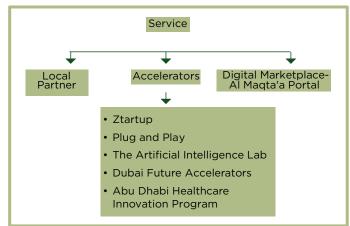


MARKET ENTRY STRATEGIES

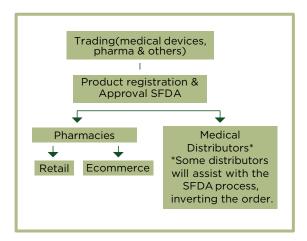
Alongside the plethora of opportunities that the UAE and Saudi healthcare markets offer to New Zealand exporters, there are also risks, challenges, and other factors to be considered before diving in. The flowcharts below provide businesses looking to expand into these markets with a basic overview of the steps needed to get there.

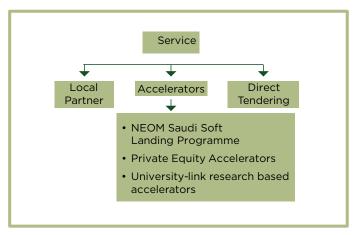
The UAE





Saudi Arabia





Exporters should get in touch with NZTE to build an in-depth understanding of each market, and for help to build their tailored market entry strategies.

NZTE's Expo Business Leverage Programme (EBLP) is a great way for healthcare companies to start this journey and grow their understanding of the UAE and Saudi markets. The Programme will include in-person trips to the region in 2022 and coincide with the largest healthcare trade exhibition in the region, Arab Health, from 24 - 27 January 2022.

With experts on the ground in both countries, NZTE can help connect businesses with the key players and knowledge they need to expand their international trade during EXPO 2020 Dubai and beyond.



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Appendix

Regulation in the UAE

All health and medical companies must meet the <u>Ministry of Health and Prevention (MoHAP)</u> Drug Registration and Control Department approval requirements, and must be aware of the legal requirements to supply medical products and services in the UAE, in particular the following laws:

- Federal Law No. 4 of 1983 concerning pharmaceutical professions and establishments.
- Federal Law No. 5 of 2015 concerning private health facilities.
- Federal Law No. 20 of 1995 concerning medicines and preparations derived from natural sources.
- Federal Law No. 7 of 1975 which covers the practice of human medicine and is relevant to all health and medical companies.
- Federal Law No. 28 concerning the detention and treatment of people with mental illnesses.

Regulation in Saudi Arabia

There are a number of regulators, agencies, and government bodies to be aware of when expanding a healthcare business into Saudi Arabia. These include:

Ministry of Health: MOH oversees the healthcare sector and health policy for Saudi Arabia. It is responsible for the majority of hospitals, 95 percent of the primary care units, and decision-making within the sector.

937: The tele-health entity within the Ministry of Health which citizens can use to call for health-related queries. It is responsible for several health-tech deliverables in the Kingdom.

Council of Cooperative Health Insurance: An executive health body overseeing the implementation of the national healthcare strategy. It also enforces the standard of care in both public and private healthcare sectors.

Saudi Food and Drug Authority (SFDA): An independent corporate entity that regulates food and drug safety in KSA. It acts as a gatekeeper for the initial market entry of medical products.

Saudi Red Crescent Authority: The humanitarian branch of healthcare in the Kingdom, responsible for emergency services, including a free ambulance service.

Saudi Commission for Health Specialties: A scientific commission that regulates health carerelated practices and accreditation, particularly in the field of research and qualifications.

Johns Hopkins Aramco Healthcare: A large health complex, exclusively available to the staff and families of Aramco, one of the world's largest petroleum and natural gas companies.

Medical Cities

There are a number of healthcare cities across the UAE and Saudi Arabia (some of which are under development) with varying specialties, and levels of peripheral services and commercial activities, including hotels, restaurants, and shopping centers. These cities include:

UAE

- Burjeel Medical City, Abu Dhabi
- Sheikh Khalifa Medical City, Abu Dhabi
- Dubai Healthcare City, Dubai
- Sharjah Healthcare City, Sharjah

Saudi Arabia

- King Abdullah Medical City, Makkah
- King Fahad Medical City, Riyadh
- King Faisal Medical City, Southern Regions
- King Khalid Medical City, Eastern Regions
- King Saud Medical City, Riyadh
- Prince Mohammed bin Abdul Aziz Medical City, Northern regions



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