

Dubai's healthcare sector to continue to witness growth

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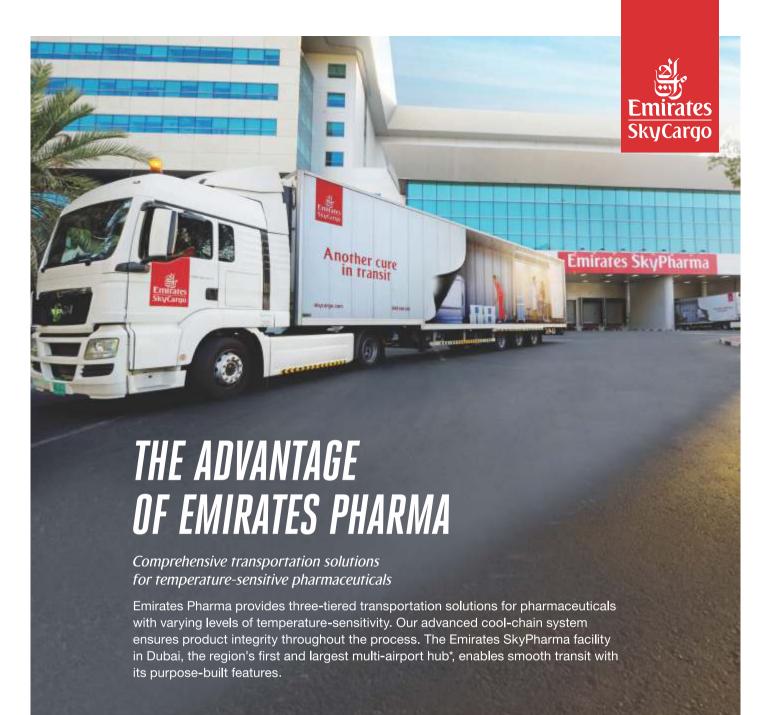
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Fditor's Note

At the forefront of innovation

One of the major events in our industry is Arab Health that has been bringing the latest innovations in healthcare for over four decades. Not only the region's but the world's leading healthcare event in its 44th edition is expected to attract over 85 thousand participants and more than 4 thousand companies from all corners of the world while experts are geared to present the latest updates and insights for four consecutive days in Dubai from 27-30 January 2019.

And there are many attractions to choose from. The dedicated 'Innovation Hub' is going to be taking centre stage, which has evolved from last year's 'Personal Healthcare Technology Zone'. The Hub aims to showcase the latest in healthcare technology such artificial intelligence (AI), disease management and home care as well as accessories for mobile devices, and telemedicine platforms. The 'Innov8 Talks' will also be hosting a series of sessions for healthcare startups and SMEs. On the financial side, according to the organizers, 2018 edition of Arab Health generated \$778 million (AED2.8 billion) worth of business and this year's edition is expected to create a new record.

Thanks to the wise leadership, Dubai has always been at the forefront of innovation and development ahead of the world's other major cities such as 'becoming the world's smartest city by 2021'. Our main story takes a look at some of the trends and initiatives that continue to drive growth for the healthcare sector. With population growth and increased life expectancy, Dubai will only attract more investment and offer the best of health services to the world.

Furthermore, proving the attractiveness of the region once again, the GCC Healthcare Industry Report by Alpen Capital highlights that the current healthcare expenditure (CHE) in the GCC is to reach \$104.6 billion in 2022 from an estimated US\$76.1 billion in 2017, implying a CAGR of 6.6 per cent. Our feature story tells more about the opportunities in healthcare sector in the GCC.

Bringing out 2019's first edition, we look forward to receiving your suggestions to bring MediWorld ME to greater heights.

Sincerely,

Editor, MediWorld ME





06-Cover StoryDubai's healthcare sector to continue to witness growth







10-A bio-inspired technology to help with faster recovery

14-Investing in GCC healthcare





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27-34 News & Updates

- HA advocate early screening for prevention of cardiovascular disease
- RCSI and MBRU sign MOU to foster advancement in healthcare education
- High-intensity sports and play can cause fractures in children
- Back pain myths and facts identified by expert
- Pharmax opens AED125m production facility at Dubai Science Park



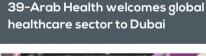
40-Quick References

42-Events Calendar

35-The Health Promotion Department of Sharjah organizes regional conference



38-Medical expertise federated under French healthcare brand in Dubai









Dubai's healthcare sector to continue to witness growth

Knight Frank underlines that the sector's expansion is to be driven by consolidation, public private partnership opportunities, and introduction of highly specialized health services







ubai is among the most, if not the most, rapidly evolving cities in the world, which embraces knowledge, technology and innovation with open arms. Dubai's ambition of becoming the world's smartest city by 2021 is case in point of this ambition and openness. The healthcare sector is one of corner stones for this rapid change, as it is ticks all the boxes relating to adoption and utilization of innovation, knowledge and technology.

Due credit must be given to the Dubai Health Authority (DHA) and other government bodies who have led this positive transformation and are tirelessly working towards improving this sector and turning the emirate into the medical hub of the region. Shehzad Jamal who is a Partner at Knight Frank and heading the Healthcare & Education Service Lines shares his expertise on the health care sector in the Emirate of Dubai in conversation with Vasujit Kalia.

Some of the recent trends and initiatives that continue to drive growth for the healthcare sector are listed below:

Government-led initiatives

 10 year residency visa for specialists in medical, scientific, research and technical fields Due credit must be given to the Dubai Health Authority (DHA) and other government bodies who have led this positive transformation and are tirelessly working towards improving this sector and turning the emirate into the medical hub of the region

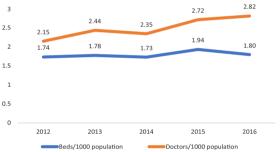
HC Indicators per 1,000 population

	2012	2013	2014	2015	2016	
Beds/1000 population	1.74	1.78	1.73	1.94	1.80	
Doctors/1000 population	2.15	2.44	2.35	2.72	2.8	
Nurses/1000 population	4.75	5.31	5.07	6.18	6.43	
Nurses/ Doctors	2.21	2.18	2.16	2.27	2.28	
Source: DHA,HAAD, MOH,WHO statistics						

- Permitting 100 per cent foreign ownership of businesses both onshore and offshore
- Promotion of medical tourism Dubai has introduced a one stop shop portal in the form of Dubai Health Experience (DXH) which provides all relevant information such as; insurance, appointments, booking hotels and tickets etc. to help patients throughout the process
- DHA leading from the front by introducing telehealth across all DHA hospitals and health centers:
- · Telemedicine for diabetic eye care
- Telehealth is being used to refer complicated cases to Rashid Hospital
- Robodocs are used linked to Rashid Hospital's Trauma Center
- Mandatory insurance for all residents which also includes bold initiatives such as:
- Basmah initiative scheme covers screening as well as treatment of three types of cancer; breast, colorectal and cervical
- Free screening and treatment of Hepatitis C patients
- · Healthcare free zones: Dubai has introduced two







healthcare free zones - Dubai Healthcare City (established in 2002, the first of its kind in the region) and Dubai Biotechnology and Research Park (under development)

 Facilitating private sector participation has led to increased investment which is reflected in increasing beds and healthcare professionals per 1,000 population. [See Chart C]

Demographic trends

- Population growth: The UAE has witnessed growth of 4.74 per cent during years 2007 to 2017, whilst population of Dubai has increased at a CAGR of 4.25 per cent during the same period. In addition, composition of the UAE population is evolving:
- Increased life expectancy (currently 77.6 years compared to 68 years in 1980) - leading to additional requirement for geriatric and long-term care related services.
- Wider middle-aged population base expatriates are choosing to reside in the country for longer durations, creating demand for specialized services such as endocrinology, cardio vascular, neurology specializations etc, due to lifestyle diseases, unhealthy habits which get augmented due to consumption of processed foods, sedentary life style etc.

The UAE has witnessed growth of 4.74 per cent during years 2007 to 2017, whilst population of Dubai has increased at a CAGR of 4.25 per cent during the same period. In addition, composition of the UAE population is evolving.

Propensity to spend on health

UAE spend per capita towards healthcare is the second highest in the region and rests at US\$1,667. This demonstrates that residents are keen to get themselves treated in the country instead of travelling abroad or back in their home countries.

Sector activity

The sector is increasingly witnessing consolidation (reenforcing the hub and spoke model) and arrival of international brands:

- Sector consolidation: The UAE witnessed over a dozen healthcare related transactions since year 2014, the most active companies were NMC Health PLC and Mediclinic Group.
- The country has recently seen entry of established foreign operators from the UK, US and Singapore such as Cleveland Clinic (Mubadala), Kings College Hospital London (Al Tayer Group), Huston Methodist Hospital (Merass) and Parkway Hospital (UEMS Group) etc.

Keeping in view all the points discussed above, the outlook of Dubai's health sector is positive and presents opportunities to both healthcare operators and investors. The key opportunity areas identified by Knight Frank are presented below:





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Capacity gap

There are approximately 4,627 hospital beds in the emirate with the private sector contributing 52.6 per cent of the total beds (CAGR of 13.7 per cent from 2012 to 2016). The total bed density sits at 1.9 beds per population is shy of the world average of 2.7 beds. However, it may be argued that with a relatively young demographic profile and new technology employed within healthcare in Dubai, the requirement of beds is not as high.

Dubai is divided into a total of nine sectors with Sector 3 hosting approximately 3,200 of all hospital beds. With the continuous expansion of the city and other sectors being increasingly populated there is an evident opportunity for healthcare operators to consider introducing healthcare facilities in Sectors 1, 2 and 4, These sectors combined host approximately 1.4 million people with only 1,157 beds to serve this population.

Telemedicine

DHA has introduced telemedicine in its network which encourages the private sector and international healthcare service providers to introduce this technology and broaden their penetration in Dubai and the region. A few private sector participants have entered the arena and seem to have gained traction with the local populous.

The potential in this area is immense and can pave the way for collaboration of domestic healthcare operators with other internationally renowned healthcare providers. The practical advantage of this method of care is that it provides immediate access to a healthcare professional, restricts travel to a healthcare service provider on a need basis and reduces the burden in the outpatient department of healthcare facilities. In critical cases, use of telehealth may also result in the saving of lives as real time specialist guidance can be provided in order to stabilize a patient in healthcare facilities which do not have adequate specialists.

Centers of Excellence

Increasing general public awareness of healthcare shows an increasing inclination of the population seeking preventive care and for reactive measures they prefer centers of excellence over general hospitals. This trend presents an opportunity for existing and new market participants to introduce:

- Windows for preventive care services such as screening programs, genetic studies to understand the disease predisposition among others, which has proven long term health and economic benefit for the patient and the overall health system of the country
- Centers of Excellence in areas of their core strength especially in medical conditions relating to oncology, orthopaedic and lifestyle related diseases.
- To summarize, Knight Frank believes that the healthcare sector will continue to witness growth on the back of strong market fundamentals and measures adopted by the government to make UAE and particularly Dubai a regional healthcare hub. Going forward the sector will continue to be driven by consolidation, public private partnership opportunities, interest of international operators and introduction of highly specialized health services



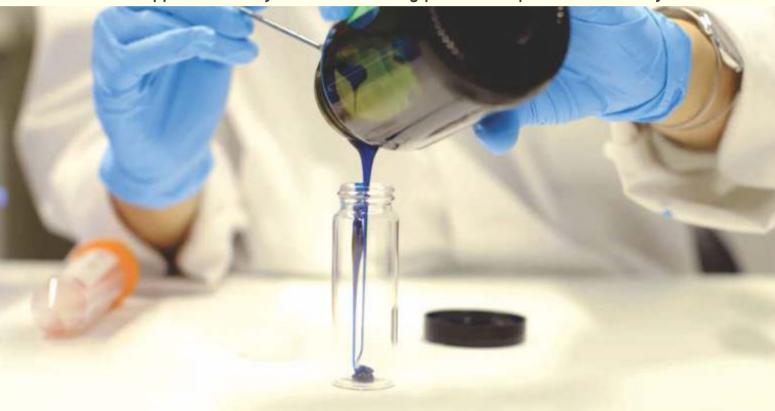




A bio-inspired technology

to help with faster recovery

The allusion to tissue reconstruction is a reference to the fact that each of the applications for its polymers, including SETALUM Sealant, is intended to support the body's natural healing process to promote recovery



Adhesives and sealants have existed since time immemorial. Some of the earliest sealants were extracted from sources or processed from products like latex and animal proteins. However, technological development in the modern world has brought about new ways of formulating these adhesives and sealants. The chemical and synthetic manufacturing of these products with process equipment has allowed the necessary development as demand in the market has increased. Sealants and adhesives have now been significantly adopted by the medical industry for use in the surgical department to close wounds.

Utilization of adhesives and sealants in the medical industry has had a notable impact in the capability for wound management and surgical purposes is progressively being unveiled as these two industries continue to develop.

As of 2017, in the adhesives & sealants market, adhesives segment was valued at \$46,104.45 million and sealants at \$9,530.5 million, which are expected to

register CAGR of 5.10 per cent and 6.1 per cent respectively, during the forecast period (2018-2023). Asia-Pacific is likely to lead the market, due to the rapid economic growth, according to Mordor Intelligence.

Moreover, 'The Adhesives and Sealants Market' share is expected to garner 66,876 million by 2022, registering a CAGR of 3.7 per cent during the forecast period 2016 - 2022, according to allied market research.

Sealants can either be fibrin-based, thrombin-based, collagen-based, or gelatin-based. The most commonly used sealant in the medical industry is the fibrin. In the United States, doctors for orthopaedic surgeries have primarily adopted it. Its penetration rate is quite efficient, and it is believed to be between 25-30 per cent.

However, fibrin sealants are not as effective under wet surgical conditions because an estimated range of between 10 per cent to 15 per cent significantly reduces its penetration rate. The demand of sealants has tremendously increased in the modern medical market. This has been instigated by the fact that most sealants







improve biocompatibility and have a powerful sealing ability. Thus, they meet the needs of most users including doctors.

MediWorldME spoke with Gecko Medical's CEO Christophe Bancel to discuss how is their SETALUMTM Sealant, a biocompatible, bioresorbable and on-demand activated sealant usable in wet and dynamic environments as an add-on to sutures during vascular surgery.

SETALUM[™] Sealant

The SETALUM $^{\text{TM}}$ Sealant is a biocompatible, bioresorbable and on-demand activated sealant usable in wet and dynamic environments as an add-on to sutures during vascular surgery. The polymer is applied to tissue in-situ and activated using a proprietary light activation pens. The entire process is completed in vivo, and enables the in situ printing of an instant hermetic barrier and effective homeostasis.

"Our SETALUM ™ Sealant is a biocompatible, bioresorbable, and on-demand activated sealant designed to be used in wet and dynamic environments. The use case we devised for the sealant is as a complement to surgical sutures during vascular surgery. A surgeon can apply the sealant to the vascular tissue and then use a specialized, proprietary light pen to activate the SETALUM Sealant key properties," explained Bancel.

The grant of the CE Mark for the vascular sealant is the first regulatory validation of the safety & performance of Gecko Biomedical's scalable & innovative polymer platform.

"In vascular surgery, there are a number of factors that combine to create a difficult environment for traditional adhesives, including constant movement and flowing liquids—you must have a material that is strong while also being flexible. Gecko Biomedical's SETALUM Sealant is helpful with these procedures because it meets all of these requirements, in addition to the fact that it is biocompatible and can be absorbed by the body. A surgeon can apply this quickly and simply as a viscous liquid with an application device that is proprietary to Gecko Biomedical and then change it into its solid, flexible state with light activation, also proprietary to our company."

"Our SETALUMTM Sealant is a biocompatible, bioresorbable, and ondemand activated sealant designed to be used in wet and dynamic environments. The use case we devised for the sealant is as a complement to surgical sutures during vascular surgery. A surgeon can apply the sealant to the vascular tissue and then use a specialized, proprietary light pen to activate the SETALUM Sealant key properties." - CEO Gecko Medical, Christophe Bancel

Bio-inspired technology

Bio-inspired technology refers to any technology that is inspired by nature. Some of the core features of Gecko Biomedical's polymer-viscosity, hydrophobicity, change of state (viscous liquid to flexible solid) is controlled by a stimulus.

"As you can imagine, one of the challenges of vascular surgery is that the blood is flowing, and bleeding must be controlled in order to complete the procedure. The SETALUM Sealant can meet this requirement for these surgical procedures, we have shown that it works for this specific use case with a clinical trial. In 2016, we conducted a trial to look at the safety of the sealant, as well as the performance, which we tested by looking at the percentage of immediate homeostasis once a clamp placed during surgery was removed. The subjects in the trial were all patients needing a carotid endarterectomy. Of 22 patients enrolled, immediate homeostasis was achieved in 85 per cent of patients."

Key features of SETALUM Sealant include its biocompatibility and the fact that it is bio-resorbable, as well as the viscosity of the polymer and its hydrophobicity. The Gecko Biomedical polymer is also only activated by light, and it's a very specific light, which means that a surgeon can place the SETALUM Sealant without being concerned it will start to solidify until he or she is ready. Once the light hits the sealant it transforms into it's solid, flexible state, and this is a crucial feature because the surgeon controls it and polymerization takes place on demand.

Bancel added, "The technology was developed at MIT by Robert Langer and Jeffrey Karp, both co-founders of Gecko Biomedical, and Maria Pereira, our Chief Innovation Officer, to provide a solution to a problem faced by surgeons every day, which is how to help patients heal more quickly. The solution from the team at MIT was to develop a technology that could be used in multiple ways to close internal wounds and support tissue reconstruction, that's how the foundational polymer was born. The SETALUM Sealant is just the first of many use cases for the polymer that they developed."



The SETALUM sealant is just a single use case for the polymer it is made of. Depending on how it's formulated the polymer or functionalize it, it can also be used as an adhesive, a filler, a tissue guide, or even as a means to provide controlled release of drugs into the body. It can be used on more than just vascular tissue, and each of these uses requires its own delivery device and a specific activation light, which is determined by the use case.

Healthcare innovation

"As you may imagine, healing is a number one concern after treatment, and our SETALUM Sealant offers surgeons a less invasive way to seal surgical wounds, which improves patient care by promoting faster healing. I believe we will continue to see new developments in the sealant space, but in most cases, these developments are chemical adjustments of old formulas. They don't address the issues presented by the dynamic environments our product is made for. Specifically, as I mentioned our sealant will be applicable in wet environments, and flexible enough to be used on moving parts without losing the seal," Bancel remarked.

"Furthermore, the SETALUM sealant is just a single use case for the polymer it is made of. Depending on how it's formulated the polymer or functionalize it, it can also be used as an adhesive, a filler, a tissue guide, or even as a means to provide controlled release of drugs into the body. Additionally, depending on its formulation, it can be used on more than just vascular tissue, and each of these uses requires its own delivery device & a specific activation light, which is determined by the use case.

"Absolutely—our initial plan for the technology is that it will be used as an add-on for vascular surgery, but we already have many more ideas for other clinical indications and ways that the technology could be useful for surgeons and others. There is definitely more to come here," he continued.

The allusion to tissue reconstruction is a reference to the fact that each of the applications for its polymers, including with their first product, the SETALUM Sealant, are intended to support the body's natural healing process, such as by holding something in place, as with the sealant, to promote recovery.

"The SETALUM Sealant is not yet on the market - we received CE Mark approval for the sealant last year, that will allow us to market the technology in Europe. Now, we're constructing a manufacturing facility in Roncq, in the Hauts-de-France Region, that will use only green electricity, and it will feature four clean rooms and an analytical laboratory. We plan to produce all of our liquid polymers in individual syringes and in sterile conditions, ready-to-use, so completion of the manufacturing site is a key step to putting this on the market," the CEO highlighted.

With the sealant's 'BlueSeal' clinical study denotes that the SETALUM Sealant could achieve immediate



homeostasis at a rate of 85 per cent. However, the product has not been studied yet for applications to air leaks following surgeries yet.

Other technological advancements

"We plan to use chemically different versions of our polymer as the base for other products, and we plan to keep innovating in tissue reconstruction. Specifically, we will look to expand functionality of the polymer to look at things like adhesives, fillers, 3D printed devices, etc., but we will also expand to new therapeutic areas, such as cardiac tissue, nerves, bone and tissues related to urology and ophthalmology," Bancel further explained.

Additionally, the company is working on other advancements that may be less visible to some, such as the manufacturing facility that the company is building, and conversations that with potential partners about future applications for its polymer technology.

"We will be marketing our SETALUM Sealant in a prefilled syringe, so there is no preparation time, and each version of our polymer will require a specific delivery adapter. Additionally, when a surgeon is ready to set the polymer all that is needed to cure it is a specific light that we have developed, and the polymer can then be set on demand. As far as biocompatibility, the SETALUM Sealant offers long term healing support without the threat of toxicity, and it will be the same with our other products that will eventually be a part of the broader polymer platform."

Biocompatibility issue

Efficacy is the key criteria when selecting a technology, however, biocompatibility is a key requirement and when it comes to tissue reconstruction, bioresorbable is much better, according to Gecko.

"As technology advances and surgeons have more options presented to them that fit these criteria, we definitely think this will be a more important criteria, but absorbability won't trump safety, so it will be important that any new technologies can be incredibly safe and as effective as the current standard of care.

"SETALUM is designed to provide immediate hemostasis allowing the surgeon to complete in an effective manner the specific vascular reconstruction procedure he or she has to work on. The goal is to facilitate the surgical procedure itself, but also recovery of the patient," Bancel concluded.







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Investing in GCC healthcare

The recent report by Arab Health Exhibition and Congress identifies the key drivers for the long term development of the region's healthcare sector







s a consequence of falling oil prices, diversification of the economy has remained a priority for governments across the Gulf Cooperation Council (GCC) in recent years. Throughout troubled economic times as well as during fiscal stability, spending on healthcare has continued to grow. The private sector has increasingly been considered as a key partner in the long-term development of the healthcare industry, particularly in terms of the quality of care in medical services.

According to a 2018 GCC Healthcare Industry Report by Alpen Capital, the current healthcare expenditure (CHE) in the GCC is projected to reach US\$ 104.6 billion in 2022 from an estimated US\$76.1 billion in 2017, implying a CAGR of 6.6 per cent. Between 2017 and 2022, CHE on outpatient services is predicted to grow at an annualized average rate of 7.4 per cent to US\$ 32.0 billion, faster than an anticipated CAGR of 6.9 per cent on inpatient services to US\$ 45.4 billion. The inpatient market will remain the largest segment with a contribution of 43.4 per cent in 2022. CHE in the 'Others' category is expected to grow at a CAGR of 5.2 per cent.

Meanwhile, in view of the anticipated rise in the number of patients, the GCC may require a collective bed capacity of 118,295 by 2022, indicating a demand for 12,358 new beds. This demand is being mitigated by the 700 healthcare projects worth US\$60.9 billion under various stages of development.

Steering growth

The expanding and ageing population, high prevalence of non-communicable diseases (NCDs), rising cost of treatment and increasing penetration of health insurance are some of the key factors spurring on the growth of the healthcare market in the region. The International Diabetes Federation (IDF) has reported that GCC countries have one of the highest prevalence of diabetes and obesity in the world, given the sedentary lifestyles and increased consumption of foods that are high in calories and sugar. Of the 149.6 thousand deaths in the GCC during 2015, nearly 73 per cent were due to NCDs. The four major NCDs – cardiovascular diseases, cancer, respiratory diseases and diabetes – accounted for more than half of the deaths in each GCC country.

The private sector is also playing an important part in the development of the healthcare industry, encouraged by mandatory health insurance and other reforms. Private players are now being incentivised through Public-Private Partnerships (PPP) to invest and manage operations, while the public sector becomes the regulator. Some countries in the GCC are in the process of implementing reforms to existing PPP laws or drafting entirely new laws to map out the legal framework for PPP projects.

For example, in Dubai, the "PPP Law" governing public-private partnerships (Law No.22 of 2015) that came into force in November 2015, seeks to encourage the private sector to be innovative and creative in identifying and funding projects for Dubai. Similarly, in Saudi Arabia - although the framework for large-scale PPP projects in the Kingdom is yet to be developed, and PPP-style procurement will require careful consideration of some key issues; it is expected to pick up, encouraged by wide-raging institutional changes to the country's fiscal policy.

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Shift in service delivery

According to latest research from MENA Research Partners (MRP), healthcare services account for the lion's share of the healthcare industry in the GCC countries, at 79 per cent, and is the fastest growing segment in UAE. On the other hand, the smallest segment, medical devices, is witnessing double-digit growth in Oman, Oatar and Kuwait. The MRP research found that healthcare services market is undergoing structural shifts to adapt to the demands of the region's increasingly health-conscious and digital savvy



Healthcare services account for the lion's share of the healthcare industry in the GCC countries, at 79 per cent, and is the fastest growing segment in UAE. The smallest segment, medical devices, is witnessing double-digit growth in Oman, Qatar and Kuwait. Healthcare services market is undergoing structural shifts to adapt to the demands of the region's increasingly health-conscious and digital savvy population.

The private sector is playing an important part in the development of the healthcare industry, encouraged by mandatory health insurance and other reforms. Private players are now being incentivised through Public-Private Partnerships (PPP) to invest and manage operations, while the public sector becomes the regulator. Some countries in the GCC are in the process of implementing reforms to existing PPP laws or drafting entirely new laws to map out the legal framework for PPP projects.

population. Although still at a nascent stage, telemedicine, home healthcare and long-term care are outperforming traditional health service providers such as hospitals and clinics.

The Industrial Internet, which leverages the potential of big data to strengthen the productivity and operational efficiency of the region's healthcare, is another important area of innovation. Hospitals are also moving from being large multipurpose and centralised

caregivers to becoming more sizeable, specialised distributed centres. With the increasing number of elderly patients shaping a new area of growth in the GCC healthcare market, we will see more and more medical technologies home based, with remote monitoring through mobile health apps and home-based diagnostics, to free up beds for more advanced cases.

Meanwhile, a report by EY has identified other big investment bets for healthcare and life sciences in the GCC. This includes accommodating the growing demand for long- term and post-acute care for people living with disabilities or patients requiring sub-acute care and rehabilitation: as well as the surge in the demand for biotechnology-based pharmaceutical products, and the medical disposables manufacturing proposition as an opportunity that could positively contribute to the GCC economic growth.

Looking further afield

Inbound medical tourism also continues to drive developments in infrastructure, as well as the



adaptation of state-of-the-art technologies and reforms in quality of care. Dubai and Abu Dhabi are at the forefront amongst the GCC nations in attracting medical tourists. The cities were ranked as the 16th and 25th most popular medical tourism destinations in the world during 2016 and Dubai aims to attract over 500,000 medical tourists by 2020.

Other GCC countries such as Bahrain, which is developing the Dilmunia Health District on a man-made island, and Oman, which is constructing International Medical City, are also working towards building world-class infrastructure and state-of-the-art technologies to attract international medical tourists.

The potentially disruptive nature of technology, the ageing population and the rise in NCDs has meant that hospitals and healthcare providers in the GCC need to be ready to adapt to the inevitable change. Advances in medical technology and the adoption of integrated care models are increasingly being utilised to modernise healthcare systems with the potential to transform the way healthcare is delivered across the GCC.

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Game-changing behavioral support at your fingertips

Nicotrax, a digital health organization, focuses on creating data-driven, customized, and scalable software programs to better treat addiction by applying predictive and powerful AI, and a seamless user experience







icotine is known to be the main addictive substance in cigarettes and other forms of tobacco and a drug affecting many parts of a smoker's body. As time passes, the smoker's brain and body gets used to having it in cigarettes. Around 80 per cent to 90 per cent smokers are addicted to nicotine. Nicotine works on the smoker's brain within 10 seconds of entering the body and causes brain to release adrenaline, creating a buzz of energy with pleasure.

However, this mixture of fun is short lived. Overtime the smoker's body has already built up a high tolerance to nicotine so that their amount of cigarette per day increases, turning them into addiction. Moreover, when a person does not smoke, they may have withdrawal symptoms as during that time their body is fighting to get used to nicotine free mode. Withdrawal symptoms include sadness, grumpiness, and restlessness, moody and so on.

While more than one-fifth of the world's population smokes, the global next generation products market is predicted to double between 2016-2021. The NGP market was estimated to be worth \$12.3 billion in 2016, a 34 per cent increase on the previous year, while the oral tobacco and nicotine market is worth an estimated \$12.5 billion. Recent estimates for the global tobacco market indicate it is worth approximately \$760 billion (excluding China). More than \$680 billion of this comes from the sale of conventional cigarettes, with around 5,500 billion cigarettes consumed per year.

The tobacco industry remains a substantial contributor to the economies of many countries and the livelihoods of millions of people across the globe, including farmers, retailers and those employed in the tobacco supply chain. Overall industry volume is estimated to have declined in 2017, and this is expected to continue as the sale of illicit cigarettes continues to rise, regulation increases further and alternative, potentially reduced-risk products continue to develop.

Smoking cassation market

The global smoking cessation and nicotine de-addiction products market was valued at \$ 11,285.7 million in 2015 and is expected to witness a moderate CAGR of 17.3 per cent during the forecast period (2016–2024), according to Global Smoking Cessation & Nicotine De-addiction Products Market Size and Forecast, US\$ Million and Y-o-Y Growth (%), 2014–2024.

The global smoking cessation market is growing due to growing awareness about health problems associated with smoking and growing acceptance rate of smoking cessation products. On the basis of products, the electronic cigarette segment is expected to grow with the fastest rate during the forecasted period. Nicotine gums led the nicotine replacement therapy market; however, the nicotine lozenges are expected to grow with the fastest rate during the projected period.

The innovation of products with better efficacy is also expected to pose as an opportunity for growth of the market. The massive unexplored market of smoking cessation industry in the developing economies is creating abundant growth opportunities for the global market. Some of the factors driving the growth of the global smoking cessation market are increasing number of smokers, stringent laws for smoking such as ban on

Nicotine works on the smoker's brain within 10 seconds of entering the body and causes brain to release adrenaline, creating a buzz of energy with pleasure. However, this mixture of fun is short lived. Overtime the smoker's body has already built up a high tolerance to nicotine so that their amount of cigarette per day increases, turning them into addiction.

Nicotrax is a digital health organization, which focuses on creating data-driven, customized, and scalable software programs to better treat addiction. Their vision is to apply predictive, behavioral analytics, powerful AI, and a seamless user experience to treatments for a variety of additional diseases and conditions.

smoking in public place, increasing government initiatives by distribution of smoking cessation products and higher taxes on tobacco products.

In addition, the increasing initiatives to create awareness about smoking health hazards, increasing incidence of lung cancer and other diseases such as cardiac diseases and respiratory disorders due to smoking, and increasing research and development for innovation of smoking cessation products are also fueling the growth of the global market.

However, the reluctance in adoption of smoking cessation products, strict regulatory requirements for electronic cigarette as medical device, restrictions and bans on the usage of electronic cigarette, and lack of awareness of nicotine de-addiction products are some of the factors restraining the growth of the global market.

MediWorldME recently met with Kyle Linton, CEO of Nicotrax to discuss how Nicotrax is a forefront in treating and preventing dependence and addiction with predictive, behavioral analytics and powerful AI.

AI-driven program

According to the new market research report 'Artificial Intelligence in Healthcare Market by Offering (Hardware,



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Software and Services), Technology (Deep Learning, Ouerying Method, NLP, and Context Aware Processing), Application, End-User Industry, and Geography - Global Forecast to 2022', is expected to grow from \$667.1 million in 2016 to \$7,988.8 million by 2022, at a CAGR of 52.68 per cent during the forecast period.

The growing usage of big data in the healthcare industry, ability of AI to improve patient outcomes, imbalance between health workforce and patients, reducing the healthcare costs, growing importance on precision medicine, cross-industry partnerships, and significant increase in venture capital investments are expected to drive the AI in healthcare market.

Nicotrax is a digital health organization, which focuses on creating data-driven, customized, and scalable software programs to better treat addiction. Their vision is to apply predictive, behavioral analytics, powerful AI, and a seamless user experience to treatments for a variety of additional diseases and conditions.

"Through our proprietary system, we can combine the most efficacious treatments (habit tracking, behavioral support, and customized drug-delivery) into one simplified program for users, which eases treatment and ensures the highest level of success. Our first product focused on Nicotine addiction and is currently being tested. By distributing a simplified and intelligent system to users, we believe that we can make a major impact within the field of preventative care.

"We believe the most effective treatments are the ones that are personalized to each user and their unique behaviors. Our technology focuses on understanding the patterns of each smoker and customizing treatment that caters to their needs," said Linton.



Scalable solutions

At the forefront of the Nicotrax smoking cessation program is the Nicotrax mobile app, designed with users in mind. The company has encapsulated their gamechanging AI and real-time support system into a simple, seamless interface, allowing users to track their behavior, completes weekly challenges, and much more.

"We utilize the power of technology, we have the ability to understand individual usage patterns and provide treatments. Users no longer have to go into a local clinic to receive cessation support that is both an inconvenience and not customized. The entire treatment process can be through the user's smart phone.

"With the proliferation of smartphone technology and behavior tracking devices, we saw an opportunity to create software to collect more data about smoking patterns and provide treatment. We felt there was an untapped opportunity to collect and leverage smoking data (which has not been collected previously) to create more customized treatment programs," added Linton.

Forefront treating addiction

There are several things that make smoking addictive. The first of which is Nicotine, which is prevalent in cigarettes and other forms of tobacco. Nicotine provides users with a rush of endorphins after use. Additionally, the act of smoking can also create habit patterns for smokers. Users often closely associate smoking with beverages, leisure, or stress and thus have more than just a chemical addiction.

"Personally, I have always had an interest in both health and technology. When I was in college I became a personal trainer so that I could help people on a 1 on 1 level. Recognizing that my level of impact would be low, I wanted to create a product that could reach millions. With smoking being the leading cause of preventable disease and death, I saw an opportunity to make a large impact."

According to Linton, there are many different stages of addiction: "Our goal is to help users better understand the different stages of addiction and what treatments are available at each stage. Our goal is to work directly with large employers and insurance companies to distribute our technology to a broader market. By working with insurance companies to create insurance incentives and employee benefits for users, we can reduce the barriers to entering a quitting smoking program and ultimately quitting. These partnerships also provide a quicker path to reach many smokers."





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Life expectancy at birth in Luxembourg increased by more than four years between 2000 and 2015, to 82.4 years, which is nearly two years above the EU average







uxembourg is a small landlocked country in Western Europe, bordered by Belgium to the west and north, Germany to the east, and France to the south. Its capital, Luxembourg City, together with Brussels and Strasbourg, is one of the three official capitals of the European Union and the seat of the European Court of Justice, the highest judicial authority in the EU. The country's culture, people, and languages are highly intertwined with its neighbors, making it essentially a mixture of French and German cultures, as evident by the nation's three official languages: French, German, and the national language, Luxembourgish (sometimes considered a dialect of German). The repeated invasions by Germany, especially in World War II, resulted in the country's strong will for mediation between France and Germany and, among other things, led to the foundation of the European Union.

Luxembourg, with a population of 502, 000 (Eurostat, 2010 estimate) has one of the best state-funded healthcare systems in Europe. The system is based on three fundamental principles: compulsory health insurance, free choice of provider for patients and compulsory provider compliance with the fixed set of fees for services.

Healthcare in Luxembourg

Luxembourg's healthcare system is one of the best in Europe. It has a high standard of state-funded healthcare covering each citizen with basic medical coverage and all citizens have the right to choose their doctor, specialist and hospital. There is a high level of care and medicine occupations, and a number of hospitals, medical centers, dental clinics, physical therapy and

private doctor facilities. Here is something to expect when it comes time to visit the doctor, hospital or pharmacy in Luxembourg.

The state provides free basic health coverage to all citizens, and all employed citizens and employees contribute to this via payments to Luxembourg's social security system. Family members who pay social security also cover all dependent family members. Children are covered under their parents, and students are covered until age 27. Coverage includes most treatment by your general practitioner or specialists, any laboratory tests, prescriptions and hospitalization.

All employees and self-employed workers in Luxembourg are required to make sufficient social security contributions to be entitled to Luxembourg healthcare services; if employed, healthcare contributions will be automatically taken out of the person's wages by the employer.

Luxembourg's healthcare system is mainly publicly financed through social health insurance. All employees contribute on average 5.44 per cent of gross income (with a maximum contribution of 6,225 euro) to the Caisse de

Luxembourg's healthcare system is based on three fundamental principles: compulsory health insurance, free choice of provider for patients and compulsory provider compliance with the fixed set of fees for services





Maladie, which is deducted directly from their salaries and half of which, is paid by the employer. In 2002, total healthcare expenditure was estimated to amount to 6.2 per cent of GDP, representing one of the lowest shares in Europe with 86 percent of the total health expenditure estimated to come from public sources.

As Luxembourg is small, few resource allocation decisions, except for hospital budgets, are delegated to local authorities. The individual hospital budgets are negotiated between the hospital administrative boards and the Union of Sickness Funds, whilst payments to health professionals are based on a fixed statutory fee level, also set by the Union of Sickness Funds. The Division of Pharmacy of the Directorate of Health maintains a comprehensive list of pharmaceuticals, which is approved for use as a national guide for reimbursement.

Private healthcare

Although 99 per cent of the population is covered by the state healthcare system private healthcare is also available and about 75 per cent of the population purchases additional health insurance coverage, which is mostly used to pay for services categorized as non-essential under the compulsory schemes and provided by non-profit agencies or mutual associations called 'mutuelles', which are also allied to the Ministry of Social Security.

However, there are no private hospitals in Luxembourg as all hospitals are state run by the Caisse de Maladie and the patient must have a referral from his/her doctor for admission to hospital, unless it is an emergency. All emergency care is provided at large hospitals and is free, even if the patients has no insurance. Long-term care is financed through separate insurance called assurance dépendence.

Luxembourg also has specialist hospitals and specialist doctors available for consultation but an appointment is necessary. As of 1 January 2004, Luxembourg had 14 acute-care hospitals, only one of which, specializing in maternity services, is run for profit. There are three groups of hospital service available (first class, second class, third class), which depend on the insurance contributions or the private health cover. Non-prescription drugs are priced much higher and are generally not reimbursed.

The medical sector is very well developed in Luxembourg. In addition to general practitioners well

The number of people dying from Alzheimer's and other dementias has more than doubled since 2000 and standardized death rates stood above the EU average between 2004 and 2013. Population ageing, better diagnosis and lack of effective treatments cause this rise.





established on the territory, many medical specialists and other professions related to health are present. It is relatively easy to get appointments, with more or less time depending on the specialty.

Life expectancy

According to the State of Health in the EU Luxembourg Country Health Profile 2017, life expectancy at birth in Luxembourg is among the highest in Europe, with only three other EU countries recording higher rates. It increased by more than four years between 2000 and 2015, to 82.4 years, which is nearly two years above the EU average. Similar to other Member States, a substantial gap persists between men and women, with men (80.0) living, on average, nearly five years less than women (84.7 years).

Most of the gains in life expectancy in Luxembourg since 2000 have been after the age of 65, with the life expectancy of women at age 65 reaching 21.8 years in 2015 (up from 20.1 years in 2000) and that of men







reaching 18.9 years (up from 15.5 years in 2000). At age 65, men can expect to live approximately 11 years of their remaining years free of disability, while women can expect to live only nine years of their remaining years in good health.

Growing mortality from pancreatic cancer and diabetes give cause for concern despite reductions since 2006, cardiovascular diseases are the leading cause of death among women in Luxembourg, and second to cancer for men. Looking at more specific causes of death, lung cancer is the main cause after ischaemic and other heart diseases, replacing stroke in the 'top three' of the ranking.

The number of people dying from Alzheimer's and other dementias has more than doubled since 2000 and standardized death rates stood above the EU average between 2004 and 2013. Population ageing, better diagnosis and lack of effective treatments cause this rise. The numbers of deaths caused by pancreatic cancer and by diabetes have also grown since 2005, with death rates for pancreatic cancer the highest in the EU in 2014.

Performance of the health system

Luxembourg reports the second best overall total amenable mortality in the EU after France, and is third when men and women are considered separately. Furthermore, only 10 per cent of all cause mortality is seen as avoidable, one of the best rates in Europe and below the EU average of 11 per cent. This shows that overall Luxembourg's health system is very effective in treating life-threatening conditions.

Luxembourg relies heavily on the recruitment of nursing staff from France, Belgium and Germany. The medical doctors are also recruited from abroad (because there is no medical school in Luxembourg) and are ageing. Although Luxembourg residents tend to come back after professional education and training abroad, this creates a strong dependency on neighboring countries and competition for scarce health professionals.

In 2002, total healthcare expenditure was estimated to amount to 6.2 per cent of GDP, representing one of the lowest shares in Europe with 86 per cent of the total health expenditure estimated to come from public sources

The health system's cost-effectiveness could be improved, particularly with greater use of generics. Although Luxembourg's amenable mortality is among the best in Europe, its health system is comparatively expensive. In comparison, relative to levels of health spending, a number of countries such as Spain and France achieve similar or even lower amenable mortality rates at much lower costs per capita, albeit on this measure it is not possible to effectively disentangle the role of health behaviors and other determinants irrespective of the health care system in influencing the level of amenable mortality.

Luxembourg's low penetration of generics in the pharmaceutical sector is a good example of how cost-effectiveness could be improved. The country has by far the lowest penetration of generic drugs in the EU (11 per cent of the total volume of reimbursed pharmaceuticals versus 49 per cent in Member States with available data in 2015). To increase the use of generics, the Ministry of Health introduced a generic substitution policy in late 2014.

Two pharmacotherapeutic groups for approximately 400 medical products (accounting for nearly 10 per cent of the total expenses of the CNS) were specified eligible for generic substitution. This new policy led to a modest increase (4pc) of the reimbursement of generics between 2013 and 2016.



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Health Authorities advocate early screening for prevention of cardiovascular disease



Dubai Health Authority, Emirates Cardiac Society and World Heart Federation discussed the importance of regular health screening to protect against cardiovascular disease. Cardiovascular disease is the number one cause of death globally, claiming more lives than all cancers and chronic lower respiratory diseases combined. Over 30 million heart attacks and strokes occur every year. Of those who experience a heart attack or stroke, one in three will live to suffer another episode.

World-renowned experts discussed ways to prevent the further escalation of heart diseases at the World Congress of Cardiology and Cardiovascular Health, which recently took place in Dubai, UAE.

Dr Fahd Baslaib, Interventional Cardiologist and CEO of Rashid Hospital said, "The difference between our region and other places in the world in terms of heart disease is that we have a high incidence of diabetes and in the Middle East region. The average age of heart attacks is 50 to 55 years as opposed to 65 years in western countries. This is a significant difference and advocates the need for urgent lifestyle modification."

Dr Baslaib added that a high incidence of diabetes coupled with other lifestyle related diseases is the main reason for the high prevalence of CVD's. "We need to educate our community to regularly screen themselves

so that they can prevent heart diseases. There is a close link between hypertension, high cholesterol, diabetes, tobaccouse and heart attacks."

"As part of Amgen's long-term commitment to advancing cardiovascular health, we are raising awareness against the misperception that high cholesterol is a relatively normal and harmless part of ageing," said Mohammed Nasser, General Manager, Amgen GCC. "The awareness drive encourages high-risk patients, such as those who have already suffered from heart attack or stroke, to speak with their doctor to help reduce their LDL-C. We know the prevalence of heart attack and stroke is projected to rise. Ongoing monitoring and evaluation of LDL-C levels helps us identify patients who may need additional treatments to lower their high cholesterol."

Professor Abdullah Shehab, Consultant cardiologist, Professor of Medicine and President of Emirates Cardiac Society, said, "This campaign offers education for patients and caregivers, particularly those who have already had a cardiovascular episode and live in fear of having another. The campaign aims to encourage a heart-healthy diet, exercise and therapies, especially for those patients who remain at a risk of cardiovascular disease due to high levels of cholesterol."





RCSI and MBRU sign MOU to foster advancement in healthcare education

The Royal College of Surgeons in Ireland (RCSI) Dubai and Mohammed Bin Rashid University of Medicine and Health Sciences (MBRU), Dubai Healthcare City Authority's academic arm, signed a Memorandum of Understanding (MOU) that highlights their joint efforts to support healthcare professionals through high-quality education, continuing professional development, research and innovation.

RCSI and MBRU have a long-standing friendship, strategic partnership and are continuously cultivating their relationship through joint initiatives such as the "Women in Leadership program", which caters to women from a range of disciplines and backgrounds every year, and the "MBRU Leadership Development program." The MOU signing coincided with RCSI's Masters Conferring Ceremony during which 25 of MBRU's leadership team were recognized for completing RCSI's Leadership Development Program.

Professor Ciaran O'Boyle, Director of the RCSI Institute of Leadership said: "The potential collaboration between two leading health science institutions will bring innovative and dynamic improvements across various elements and disciplines within the UAE healthcare".

Commenting on the MOU signed, Dr Amer Sharif, Vice Chancellor MBRU, said: "We have worked with friends in RCSI for many years and it's truly an honor to finally have this partnership formalized and taken to the next level. RCSI and MBRU share a common purpose to serve humanity, and we hope through this MOU to continue the work that we started to enhance health, research and medical education locally, regionally and internationally."



RCSI is ranked among the top 250 (top 2 per cent) of universities worldwide in the Times Higher Education World University Rankings (2019) and its research is ranked first in Ireland for citations. It is an international not-for-profit health sciences institution, with its headquarters in Dublin, focused on education and research to drive improvements in human health worldwide.

Mohammed Bin Rashid University of Medicine and Health Sciences (MBRU) is Dubai Healthcare City's first medical university which offers undergraduate and postgraduate degrees through its two colleges, Hamdan Bin Mohammed College of Dental Medicine (HBMCDM); which has a number of specialty dental postgraduate programs. The second is the College of Medicine for undergraduate medical students offering a Bachelor of Medicine and Bachelor of Surgery program (MBBS).

Middle East IVF market worth US\$1 billion as infertility rates rise

The latest research by Colliers International has revealed the current global In Vitro Fertilization (IVF) market is estimated to be between US\$10 billion to US\$12 billion, while the current IVF market size for Middle East & North Africa (MENA) is approximately US\$1 billion, indicating a high demand for IVF and related treatments in the region.

The figures, published in a new report titled "In Vitro Fertilization (IVF) & Fertility in the MENA region", revealed that compared to 10 per cent worldwide, infertility in the MENA region is 15 per cent or higher, with male infertility a growing problem occurring in approximately 50 per cent of the cases in the GCC and Middle East due to lifestyle, diabetes, obesity and genetics related factors, as GCC countries have one of the highest diabetic and obesity rates in the world.

The report highlighted that although the population in the MENA region has increased from over 100 million in 1950 to 380 million in 2017 and is expected to increase to 700 million by 2050, overall fertility rates have decreased from seven children per women in 1960 to just three in 2017. The research provides an in-depth analysis of the fertility rates in MENA region and, despite overall high population growth rates, why IVF remains in demand in the region, especially in the GCC countries.

Mansoor Ahmed, Director Healthcare, Education & PPP for MENA Region at Colliers International, said: "IVF is not only sought after locally but is one of the leading treatments undertaken by medical tourists in the UAE, especially in Dubai. Based on Colliers' discussions with leading operators, medical



tourism accounts for 10 per cent to 15 per cent of the IVF patient volumes."

According to the report, new innovations and improved testing techniques are gradually creating paradigm shifts in the field of assisted reproductive technology. Particularly the increased focus on pre-marital screening for consanguineous (relatives) couples and the development of new genetic tests for screening of the embryos greatly improves the chance of minimising certain genetic diseases common in this region.



High-intensity sports and play can cause fractures in children



In an age that is dominated by screens and video games, parents generally encourage children to play outdoors to build upper body strength, balance and resilience. However, engaging in vigorous physical activities may lead to fall which can break a bone. Broken bones or fractures are common in childhood, with up to 40 per cent of girls and as many as 50 per cent of boys experiencing a fracture. In the UAE, there are several paediatric fractures recorded annually.

"Injuries caused by sports and high-intensity physical play are the common factors that lead to a fracture. Basketball, soccer, gymnastics, lacrosse, hockey and football are some of the common sports that can cause injuries. In the past five years, there have been several play and sport related emergencies at Burjeel Hospital for Advanced Surgery, with most of them falling under the 5-9-year-old age group," said Dr Arkan Harb Alhuneiti, Consultant Paediatric Orthopaedic & Spine Surgeon - Specialising in Paediatric Spine, Hip Surgery and Limb Lengthening at Burjeel Hospital for Advanced Surgery (BHAS).

Specializing in paediatric orthopaedic, Dr Arkan has a huge experience in the diagnosis and treatment of all orthopaedic cases. He has worked as a consultant orthopaedic surgeon in Jordan and Saudi Arabia and has



performed over 1,000 surgeries. His key expertise includes areas a paediatric spine deformity, scoliosis, developmental dysplasia of the hip, complex corrective osteotomy's for paediatric deformity. paediatric trauma, cerebral palsy management of paediatric fractures.

"Fractures in children are caused when more force is

applied to the bone than the bone can absorb. Breaks in bones can occur from falls, trauma, or as a result of a direct blow or kick to the body. As a child's bone heals faster than an adult's bone, healing occurs faster. It is however recommended to treat a fracture correctly to make sure children don't run into problems down the road," added Dr

Forearm fractures are the most common fractures in children, responsible for up to 50 percent of all fractures, and are much more common than leg fractures. Other common fracture locations include the distal radius, elbow, clavicle and tibial shaft. While each child may experience a fracture differently, the most common symptoms are pain and swelling in the injured area, deformity in and warmth, bruising, or redness in the injured area.

Fractures in children can heal well if the child is young and doesn't have a medical history. But, since young bones are fragile and growing, a fracture can cause problems as the child grows. As such some fractures require surgery to stabilize growing bones, while others can be treated with immobilization or casting. The ultimate goal of treatment is to control the pain, promote healing, prevent complications and restore normal use of the fractured area.

Hyundai reveals new technology to assist hearing-impaired drivers

Hyundai Motor Group has revealed a new innovative technology that assists hearing-impaired drivers by replacing sounds with visual or touch-based cues, and using advanced sensor and artificial intelligence technology to help them 'hear' the traffic around them.

The technology employs two separate driving assist systems that work together simultaneously – the Audio-Visual Conversion (AVC) and Audio-Tactile Conversion (ATC). They use artificial intelligence (AI) to analyze sound patterns outside the car, and then use vibrations of the steering wheel and pictograms displayed via the head-up display (HUD) to alert the driver and explain what the system can hear. The steering wheel is also equipped with multi-colored LEDs which indicate navigational information while driving.

For example, the technology could alert the driver of emergency vehicles by recognizing the sound of a siren, vibrating the wheel as an alert and displaying the appropriate pictogram on the HUD. It also translates data from vehicle sensors – such as when reversing – so the driver knows how far the car is from obstacles without relying on the warning chime.

Hyundai demonstrates the technology in a campaign video called 'Quiet Taxi'. The campaign video, along with the technology itself, emphasizes the value of 'freedom of mobility,' demonstrating Hyundai's efforts to enable the hearing-impaired to drive freely and safely using state-of-the-art innovative developments. As part of its goal, Hyundai also developed an application that enables communication between passengers and drivers who are hearing-impaired. The documentary follows Daeho Lee, Seoul's first ever designated hearing-impaired taxi driver, as he uses the driving assist technology.



du Recognized as best-in -class following Corporate Health Award win



du, from Emirates Integrated Telecommunications Company (EITC) has been announced as one of the UAE's leading employers following the telco's success in winning the Health & Safety Initiative of the Year Award at the 2018 Daman Corporate Health Awards. The accolade reflects du's commitment towards empowering employees through dedicated health and safety outcomes aimed at delivering a happy, inspired workplace to drive long-term business success.

du came out on top for the award after being initially shortlisted amongst 8 other UAE companies in this category, and the win follows years of health and safety promotion. The company's success stems from the continuous efforts to ensure the highest standards of Indoor Air Quality (IAQ) are maintained throughout its offices and retail stores across the UAE.

Ehab Hassan, Chief Human Resources Officer, EITC, said: "Our focus has been ensuring we provide a safe and conducive working environment for our staff and visitors for some time now. Their wellbeing is a top management priority and forms a central part of the culture to ensure productivity and the utmost happiness. Winning this award is testament to our efforts, which are aimed at proactively aligning our wellness programs to address specific working conditions and continuously promoting awareness of health and wellbeing."

The Indoor Air Quality program requires the facilitation of comprehensive measuring of certain chemical, biological and physical parameters in the air that have been known to be associated with acute health conditions. Control measures have been applied to improve ventilation efficiency and extraction of such elements. Furthermore, du has begun mapping absentee rates in relation to the type of illnesses being reported by employees and aligning specific sick absenteeism rates with age, building locations, gender, seasonality, and climatic conditions.

John Emmerson, Events Director MEED, said: "The Health & Safety Initiative of the Year Award recognizes employers who have made unparalleled commitments to ensuring the health and wellbeing of their corporate environs. This year, du has surpassed expectations by demonstrating outstanding performance through its health and wellbeing strategies. This has been shown through unequivocal evidence supporting effective communication of safety messaging, well-embedded safety protocols within the business, and superior innovation of health and safety programs."

Back pain myths and facts identified by expert



Back pain is one of the most common spinal conditions in the UAE and third most common reason for visits to the doctor's office. Severe cases can lead to spinal degenerative disease, also known as degenerative disk disease, or any disease of the spinal column, which can range from Herniated Disc, Spinal Stenosis, Degenerated Disc Disease, and Disc Prolapse.

It might be a sharp stab or a dull ache. At some point, 8 out of 10 of us will have back pain. In fact, most people also associate that the colder the weather, the more discomfort occurs in one's back muscles and joints. Dr. Khaled M Faraj, Sr. Consultant Orthopedic and Spine Surgeon, Burjeel Hospital for Advanced Surgery Dubai identifies some of the myths and facts about Back Pain in cold weather.

This is not true as there is no scientific evidence that supports this idea. Cold Temperatures do not make an actual condition worse, and it also does not develop a new condition. It means there could be muscle stiffness as the tendons and ligaments in your back tighten and become less flexible, thereby making them much more prone to injuries that in turn can cause you plenty of back pain. Winter back problems may be avoidable when you wear the right clothing to keep you warm, stretch your muscles regularly, stay active and employ basic fall prevention techniques when needed.

Cold temperatures, dark gloomy days and less hours of sunlight stresses can cause a seasonal affective disorder (SAD), which is a type of seasonal depression that can increase one's sensitivity to back pain. Therefore, during winter, depression can also lead to back pain as body aches and backaches are a common symptom of depression, and research has shown that people with severe depression actually feel pain more intensely than others.

Moreover, depression itself can cause the kind of fatigue that prevents you from exercising and strengthening your core muscles, which in turn puts added stresses on the disks, joints and ligaments in your back, making you more susceptible to low back pain, muscle strains and other injuries.

Ouite the contrary as exercise is extremely important to alleviate back pain. If you don't stretch or exercise your back a few times a week, it will lose the strength necessary to provide a straight posture and pain-free movement in the body. Exercise is the best way to help with your sciatica.





UCM awards world's first honorary doctorate to an Arab personality from the UAE

UCM, an innovative Higher Educational Institution represented by Manuela de Martino, the President of UCM and Professor Fausto Gennuso, the Director General of UCM, honored Dr. Abdul Salam Al Madani, Chairman of INDEX Holding and Executive Chairman of DIHAD and DISAB, with an honorary doctorate, becoming the world's first Arab personality from the UAE to be awarded an honorary doctorate by UCM.

This unique recognition comes in line with Dr. Abdul Salam Al Madani's commitment towards supporting humanitarian aid and relief efforts in the UAE and across the globe as well as his personal volunteering efforts in combating issues that threaten the good health of society such as 'smoking' and 'drug abuse'. Dr. Abdul Salam Al Madani heads the boards of a number of leading scientific and educational institutions from across the world through his core philosophy of human empowerment regardless of any discrimination based on color, race, religion and gender - a philosophy that he employs in his group of companies too.

Meanwhile, Professor Fausto Gennuso, Director General of UCM, extended an official invitation to Dr. Abdul Salam Al Madani to attend a special ceremony which will be held at University's headquarters in February, this year. The ceremony will be attended by a number of academics, senior officials representing UCM and prominent figures in the scientific and educational field.

UCM offers post-graduate courses in Technology Studies, Economic Studies, Engineering Studies, Social Sciences, Business Studies, Management Studies, Humanities Studies, Natural Sciences and Education.

Dr. Abdul Salam Al Madani expressed his gratitude for this unique honor bestowed upon him and conveyed his happiness for becoming the world's first Arab personality from the UAE to be awarded an honorary doctorate by UCM. Dr. Abdul Salam Al Madani further



stated that it is extremely important to offer viable solutions for vital challenges facing the societies and combat all obstacles which threaten growth and development. He emphasized that he will continue to carry out humanitarian work at the individual and the community level and support the noble cause of humanity locally and internationally.

It is worth mentioning that Dr. Abdul Salam Al Madani is the man behind "DIHAD", the annual international Aid and Development conference and exhibition held in Dubai. DIHAD strives to serve humanity and uphold all human values transcending both regional and international borders and is committed to offer the best available resources to meet and confront the global humanitarian challenges by strengthening partnerships between international organizations and institutions dealing with relief aid and development.

Dr. Abdul Salam Al Madani is also the Chairman of the Anti-Smoking International Alliance - London, which was established with the prime objective of spreading awareness among communities about the risks and outcomes of smoking.

Labelians to unveil new armchair for blood sampling

Labelians is set to exhibit for the 3rd time in the French Pavilion at MEDLAB Dubai. The teams will present full range of pre-analytical, sampling transport, molecular biology, liquid handling products, as well as the FMBIO5 Bioleader® armchair for blood sampling.

Conceived and designed by Labelians, the FMBIO5 bioleader® armchair for blood sampling is wide, robust and long-lasting. Its ergonomic upholstery and non-slip front cushion provide exceptional seating comfort. It can be equipped with a gynecological kit (paper roll holder, clamps, stainless steel stirrups) or a stainless steel tray.

The "gutter" armrests, which are very easy to adjust, guarantee that the forearm is kept in a comfortable position. Available in 30 colors, the chair features a headrest that can be customized with the logo of the purchasing laboratory or establishment.

Labelians is one of the most prominent players in the laboratory world and the leader in the distribution of disposables, furniture and services for medical biology laboratories in France. CML-ID is a French independent patrimonial holding company, specialized since 1971 in developing, manufacturing and distributing medical devices, disposables, equipments and services for the Laboratory. The Group's aims to strengthen its complementarity value chain between customers, service providers and employees.

The Group has its own production plant unit, CEB (based west of Paris), which has expertise in designing and manufacturing: Medical Devices (MD) and Devices for In Vitro Diagnostics (IVD) using thermoplastic injection molding; blow-molded High Density Polyethylene bottles; Glass Pasteur pipettes; Original equipment for OEMs.

Since the beginning of 2018, LABELIANS has been represented locally in Dubai. It has developed a partnership with one of the biggest players in the laboratory and medical sector in the Middle East.



Pharmax opens AED125m production facility at Dubai Science Park



Dubai Science Park (DSP) has recently welcomed the inauguration of its first pharmaceutical manufacturing plant, operated by Pharmax Pharmaceuticals (Pharmax), a pharmaceutical company that will produce a wide range of medications from the science-focused business community.

The opening ceremony drew the participation of His Excellency Dr Amin Hussain Al Amiri, Assistant Undersecretary of Public Health Policy & Licensing at the Ministry of Health and Prevention, Dr Younis Kazim, Chief Executive Officer of Dubai Healthcare Corporation, Malek Al Malek, Group CEO of TECOM Group, Ahmad Tabari, Chairman of the Board of Directors at Pharmax, Lamia Berrada, Chairman of the Managing Board at Bottu Pharmaceuticals & Ayman Cheikh-Lahlou, Chief Executive Officer at Cooper Pharma.

As the first advanced facility at the science-focused business community, the AED125 million (US\$34 million) plant with an annual production capacity of over 200 million tablet and capsule dosage forms is dedicated to the manufacturing and commercialisation of pharmaceuticals that target chronic conditions prevalent in the Middle East. The factory is equipped with the latest European technology, meeting stringent global regulatory standards.

Marwan Abdulaziz Janahi, Managing Director of Dubai Science Park and Chairing Member of the Pharmaceuticals and Medical Equipment Taskforce of the Dubai Industrial Strategy 2030, said: "Our region currently imports more than 80 per cent of pharmaceuticals from abroad. At the same time, technological advancements, an increase in R&D capacities and talent availability, state-of-the-art infrastructure, proximity to emerging markets, and a favourable policy framework present us with a unique opportunity to enhance our domestic manufacturing capabilities."

He added: "We have worked closely with The Executive Council of Dubai and colleagues on the Pharmaceuticals and Medical Equipment Taskforce to achieve tangible results that support Dubai's economic ambitions. The inauguration of the Pharmax manufacturing plant marks the first significant milestone in our efforts. We are delighted to welcome our business partner to our vibrant community of more than 350 companies and 3,600 industry professionals."

Established in 2016, the Dubai Industrial Strategy 2030 has identified the pharmaceuticals and medical equipment sector as one of six strategically important sectors for Dubai's economy. Positive forecasts predict that an increase in industrial capabilities will add AED160 billion (US\$43.5 billion) to Dubai's GDP, with the industrial sector growing by AED18 billion (US\$4.9 billion). Furthermore, the plan is expected to significantly enhance the UAE's R&D capacities while adding 27,000 specialised jobs and AED15.8 billion (US\$4.3 billion) to the country's export sheet.

Madhukar Tanna, Chief Executive Officer of Pharmax, said: "We are now able to locally produce medication for cardiovascular diseases, psychiatric and neurological disorders, gastroenterological diseases, metabolic disorders such as hyperlipidaemia and diabetes, central nervous system diseases, bacterial and viral infectious diseases, respiratory illnesses, asthma and allergies, bone and joint inflammation disorders, and urological diseases. This will significantly reduce the dependence on imports of related products from abroad."

Construction of the facility began in September 2015 as a joint venture between Al Ittihad Drug Store, a distributor of medicines in the UAE, and two of the largest pharmaceutical manufacturing companies in Morocco-Cooper Pharma and Bottu Pharmaceuticals.





MOHAP launches first-of-its-kind smart App

The Ministry of Health and Prevention "MOHAP" launched the first-of-its-kind smart application about pharmacovigilance under the name "UAE RADR". The application has been developed in collaboration with Medicines and Healthcare products Regulatory Agency "MHRA". UAE RADR is used for the complete management of pharmacovigilance including WHO's UPPSALA monitoring center on the side effects of drugs, guideline on good pharmacovigilance practices which features the procedures required from the marketing authorization holders for drugs and medical products to ensure the safe use of its products in the country.

Through the implementation of this initiative, MOHAP looks forward to promote patients' safety and drug safety as well, by using this smart application for regulating the reporting process about the side effects of drugs, in addition to fostering the capability of data analysis and consequently the acceleration of decisions taken and preventative measures, as well as curbing the phenomenon of fake drugs.

Also, this initiative aims to take benchmarks into account and to be acquainted with the international trends that can be leveraged in shaping policies, taking decisions, providing information and evidences which contribute to updating drug items in the drug formulary.

H.E Abdulrahman bin Mohamed Al Owais, Minister of Health and Prevention, said that UAE Vision 2021, UAE Centennial 2071, Agenda 2030 for Sustainable Development – Excellence in Implementation, form a fundamental guide for MOHAP' business, since those initiatives feature lots of basic pillars such as consolidation of the preventative aspect, development of the healthcare systems, attainment of safe drug use, consequently accomplishing a health system with world-class standards.

The strategic guidelines also include the general policies which have an impact on the work and activities of MOHAP such as the general policy for innovation.

"UAE has achieved the leadership in adopting pharmacovigilance system in collaboration with WHO. The initiative "strengthen the pharmacovigilance to achieve the safety of society" is consistent with the future directives of the country in the healthcare field and the Agenda 2030 for Sustainable Development – Excellence in implementation to ensure that all people enjoy healthy lifestyle habits and wellness. It also enhances the commitment to applying health legislations, provision of a national updated healthcare database, provision of open data and digital reports in order to take the decisions and to manage the healthcare services. The initiative is considered an important tool of



strengthening the pharmacovigilance and drug safety in the country as the system provides data which could be used in analysis and studies on the reported drugs which facilitates and accelerates the process of taking decisions and the necessary preventative measures," Dr. Abdulrahman added.

"The initiative comprises three essential pillars, firstly, the link to WHO's UPPSALA monitoring center which contributes to the automation of collecting data of drug side-effects reports through online reporting via the link available on the ministry's portal. Furthermore, the automation of studying and analyzing data in order to identify which indicators are associated with drug safety. Also, the pharmacovigilance officers, at the ministry and local health authorities, are allowed to check the reportedly side-effects reports in more than 200 countries and to keep pace with safety indicators globally so as to take preventative measures to protect the society form drug hazards," Dr. Al Amiri said.

Second pillar is the "UAE RADR" in collaboration with MHRA, UK. The application has a feature of reporting the drug side-effects in an easy way and with the involvement of society alongside healthcare professionals. The application, also, has brief statistics on the reportedly overall side-effects, which help ease the work of healthcare professionals. Dr. Al Amiri urged all people to download the application and use it in reporting the drug possible side-effects.

The third pillar identifies the national standards for pharmacovigilance and drug safety, duties and responsibilities of the marketing authorization holders for drugs and medical products to ensure the safe use of its products in the country. These standards have been tailored according to the best international practices (European Medicines Agency "EMA", the International Coordination Conference and Arabic Pharmacovigilance Code).



Medical staff from Al Ain support Earthquake Recovery Project in Nepal







In the Year of Zayed, Burjeel Royal Hospital and Medeor 24×7 International Hospital in Al Ain are proud to support a disaster-recovery project led by the global NGO, All Hearts and Hands-Smart Response. Two staff nurses from the two hospitals are in Nepal with over 60 volunteers who are building a school for the local community. The nurses will be providing basic first aid, health and hygiene awareness classes for the volunteers and demonstrations for local villagers in the disaster-affected communities.

Two devastating earthquakes in April and May 2015, killed over 9,000 and left another 23,000 injured. The destruction of infrastructure and homes was massive, with more than 5,000 schools being damaged or completely destroyed. The non-profit organization, All Hands And Hearts - Smart Response (AHAH), has been rebuilding earthquake resilient structures and schools within communities in Nepal for over three years. Cofounded in 2005 by Petra Nemcova, AHAH is a volunteer-powered disaster relief organization that addresses the immediate and long-term needs of communities impacted by natural disasters.

Dr. Arun Menon, Director of Operations, VPS AL Ain region said, "We continue to honor the memory of the



late Sheikh Zayed bin Sultan Al Nahyan, whose vision of humanitarianism extended beyond the borders of the UAE. This program is one of many initiatives which we support through our Corporate Social Responsibility work and through volunteering."

At the construction sites, there is a risk of illness and injury due to the nature of the work performed and the possible extreme conditions. Given that the nearest medical facility almost 90 minutes away, our Medical Advisors will be the first point of contact and resource for minor illnesses and injuries which may occur at either a job site or base camp and to help prepare for medical emergency responses, if needed, Dr. Menon added.

"This program would facilitate a long-term strategy for ongoing health and safety advice by allowing for continuity of any treatment and volunteer monitoring. This will result in fewer volunteer sick days and therefore more disaster-affected communities can be assisted. This program not only aligns with VPS Healthcare's expertise in providing onsite medical services, support in preventive measures, emergencies, and day-to-day treatments, but also clinical outreach programs to provide healthcare advice for people in isolated areas."

AHAH is a non-profit organization that addresses the immediate and long-term needs of communities impacted by natural disasters by engaging and leveraging volunteers, partner organizations, and local communities. Medeor 24x7 International Hospital Al Ain is a new concept in healthcare that combines the best principles of 5-star hospitality with state of the art medical facilities complimented with the latest diagnostic equipment. Medeor 24x7 International Hospital Al Ain offers a broad spectrum of specialties where the holistic approach is ensured at each step of care.



New technology could reduce diagnosis time of infectious diseases



Infectious disease experts have urged the UAE and GCC public to protect themselves from the risk of acquiring upper respiratory tract diseases such as H1N1 influenza and MERS-CoV, by following the communication and recommendations of their national public health authority. According to the World Health Organisation (WHO), Middle East respiratory syndrome coronavirus, (MERS-CoV), which was first identified in the Kingdom of Saudi Arabia (KSA) in 2012, is a zoonotic virus, denoting a virus transmitted between animals & people.

A total of eight laboratory-confirmed cases of MERS-CoV were reported globally within the month of October 2018 according to the WHO, all of them in the GCC. Experts have advised people suffering from compromised immune systems or diabetes, renal failure, and chronic lung disease should take extra measures to protect themselves from infection by avoiding close contact with camels, and taking general hygiene measures, such as regular hand washing and observing food hygiene practices.

Dr Ziad A Memish, Professor of Infectious Diseases, Public Health Department, College of Medicine, Al-Faisal University, Riyadh, KSA, and former Deputy Minister of Health for Public Health in KSA, said: "Since 2012, 85 per cent of the cases of MERS-CoV globally have been in the GCC or Arabian Peninsula and, with their experience gained over the last 10-15 years by dealing with many emerging pathogens, the Ministries of Health in our region have been very good at communicating messages relating to public safety and disease prevention. However, there is still a lot to be learned and done to get rid of the disease from our region."

One of the biggest challenges with the ongoing cases of MERS-CoV for GCC countries is inbound travel activities such as the Haj and Umrah in KSA and the increase in tourists visiting the UAE. With KSA preparing to welcome up to 30 million Umrah pilgrims by 2030,

experts have highlighted the increased risk of an epidemic and underlined the need for public health authorities to be ready to adapt to new ways of responding to epidemics in order to prevent the spread of any upper respiratory tract viruses during these times.

"Rapidly advancing technology will play a pivotal role when it comes to speeding up diagnosis of upper respiratory tract disease in this region. For example, when MERS-CoV first emerged, we relied on the Centres for Disease Prevention and Control (CDC) from the US and Public Health England in Europe to provide us with diagnostic kits to pick up on the disease.

"Instead of the 6-8 hours we currently spend on waiting for a diagnosis, now, with the increasing adoption of new diagnostic techniques such as Point of Care Testing, we have the potential to allow a lot of the new cases to be diagnosed in just 30-40 minutes. However, while these technologies are already available in our region, they are unfortunately not yet being applied," added Dr Memish.

The 6th Public Health conference taking place alongside Arab Health, will outline several important areas in which public health bodies in the GCC can contribute to making overall emergency and disaster management more effective and will outline the requirements for effective emergency medical and public health response to these events.

Commenting, Sally Thompson, Head of Conference Production at Arab Health, said: "The GCC is part of the global community, so whatever happens in other parts of the world in terms of the emergence of new diseases will have an impact on our region. By facilitating communication between the different national health authorities, and by providing a platform for public health officers to be part of these discussions, the Public Health conference is an opportunity to improve the efficiency of public health strategies during future epidemics, disasters and emergencies."



Diabetes cases in the region to increase by 110pc to 82 million by 2045

A new report by Colliers International titled "Diabesity – Impact on the MENA Region" has revealed that the number of diabetic patients in the Middle East & North Africa (MENA) region is expected to increase by 110 per cent to 82 million by 2045, second only to Africa (156pc), significantly impacting mortality, loss of productivity (GDP) and increased healthcare expenditure.

The report, which is part of the Arab Health Market Series, also highlighted the economic burden of diabetes in the region which reached US\$ 21.3 billion and is expected to jump by 67 per cent to US\$ 35.5 billion by 2045. Meanwhile, eight Middle Eastern countries – Kuwait, Qatar, Egypt, KSA, Bahrain, UAE, Jordan and Lebanon – have the highest ratio of obesity among adults globally with 27 per cent to 40 per cent of the total population affected.

The latest research from Colliers International provides in-depth analysis of the key factors impacting the "Diabesity" epidemic - which refers to a twin occurrence of the epidemics of Type 2 diabetes and obesity - with a focus on the MENA region and its future outlook

According to the report, factors contributing to the "Diabesity" epidemic in the Gulf region include altered eating patterns due to increased income and urbanisation (only 38pc of the GCC population eats fresh fruit and vegetables), sedentary lifestyles (60pc of men and 73pc of women are physically inactive), barriers to a healthy diet and lesser emphasis on



nutritional education, as well as increased consumption of sugar and sugar substitutes (GCC countries represent a US\$ 8.4 billion soft drink market).

The report also outlined a number of preventative measures being taken by governments around the region to tackle the growing problem of diabesity. For example, the UAE has developed a clear roadmap for combating and controlling diabesity. Though the challenges are still being faced in some areas such as lifestyle modification, physical inactivity and diet, government measures have led to a drop in the prevalence of diabetes in the UAE from 19.3 per cent in 2013 to 17.3 per cent in 2017.

Positive lifestyle changes seen as a cost-effective solution for non-communicable diseases

Dubai Science Park (DSP) recently hosted its fourth Advance Health meeting under the theme 'Health and Wellness for Disease Prevention'. The networking event convened stakeholders from Dubai's healthcare community to discuss ways of reducing the occurrence of non-communicable lifestyle-related diseases in the country. The forum was organized by DSP in partnership with Open Health, a medical communication and market access agency, Synapse Medical Services, a healthcare administration company & Connect Communications.

Marwan Abdulaziz Janahi, Managing Director of DSP and Chairing Member of the Pharmaceuticals and Medical Equipment Taskforce of the Dubai Industrial Strategy 2030, said: "While people across the UAE are becoming increasingly health-conscious, we still have one of the largest populations that suffers from noncommunicable diseases, including cancer, obesity and diabetes. From a financial perspective, investing in preventative measures is much more cost-efficient than treating those diseases, and the promotion of simple lifestyle changes can have a significant impact.

"The latest edition of our Advance Health event brings together stakeholders from the health and wellness industry to exchange insights on how we can become



healthier and prevent such diseases before they develop."

Dr Fatheya Al Awadi, Head of Endocrinology at Dubai Hospital, DHA said: "The UAE Vision 2021 emphasizes the importance of preventive measures to ensure a longer and healthier life for the country's citizens. To help achieve this goal, we need to employ an inclusive approach with a stark focus on Dubai's at-risk population and recognise that Dubai has a largely young population with high prevalence of pre-diabetes and/or obesity. Most of this can indeed be prevented when all stakeholders come together to ensure we have a comprehensive plan for those at risk. This will empower UAE residents to make the right lifestyle choices."





The Health Promotion Department of Sharjah organizes regional conference





The activities of the 'My Health 7th Regional Conference' were launched recently by the Health Promotion Department at the Supreme Council for Family Affairs in Sharjah, UAE. Held on 27 November 2019 under the patronage and with the attendance of Her Highness Sheikha Jawaher Bint Mohammed Al Qasimi, Wife of His Highness the Ruler of Sharjah and Chairperson of the Supreme Council for Family Affairs in Sharjah, the conference, which is themed "Talk, Listen, Change," was organized in cooperation with the World Health Organization and the Ministry of Health and Prevention, and with a strategic partnership with both the University of Sharjah and the Arab German Young Academy of sciences and humanities (AGYA).

The three-day conference focused on the theme of nutrition as a key factor in preventing chronic diseases, and included the participation of more than 32 experts and representatives from various countries in the region, as well as 20 specialists and officials from the health sectors in the UAE, and 25 spokespersons presenting educational sessions.

HE Dr Ahmed Selim Al-Mandhari, Regional Director of the WHO Regional Office for the Eastern Mediterranean (WHO/EMRO), praised the initiative of the emirate of Sharjah and stated that the Middle East



region is experiencing many nutritional changes that have contributed to the high rates of obesity in the area. He called on the countries of the region to adopt more advanced healthy food policies, and stressed the importance of promoting nutrition as it is considered a key factor in achieving the sustainable development goals of this region of the world.

HE Iman Rashid Saif, Director of the Health Promotion Department at the Supreme Council for Family Affairs in Sharjah highlighted the importance of the "Sharjah Declaration Against Obesity" that was signed during the first day of the conference by the countries that participated in the World Health Organization's Regional Meeting. She added that the declaration came as a collective pledge to work on doubling efforts to combat obesity in the region, as well as raise awareness on the dangers of this issue while also focusing on the segment of children and youth.

HE Dr Ayoub Al-Jawaldeh, Regional Nutrition Adviser at the WHO Regional Office for the Eastern Mediterranean (WHO EMRO), stated that the region is experiencing increasing obesity rates, resulting from physical inactivity, unhealthy diets and other factors, which highlights the need for more advanced health food policies across the region. He pointed out that existing evidence has revealed that there is a relationship between food insecurity, poverty, social and health inequalities, food systems and obesity, in addition to the increase in economic and social factors that lead to obesity in countries with middle- and high-income levels.

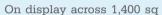
HE Dr Ayoub Al-Jawaldeh stressed the need for the region's countries to increase their focus on assessing their current situation in terms of obesity, identify their most important challenges, and then form strategic and practical implementation plans. He pointed out that 2.5 million people in the Middle East region die from non-communicable diseases each year, which is equal to 62 per cent of all deaths in the region.

Al-Jawaldeh stated that half of the region's adult women (51pc) and more than two in five men (43.8pc) were overweight or obese, according to the available statistics. He added that the rate of children that were overweight or obese were high – higher than the global average of 7 per cent - and in some countries more than 15 per cent of children were affected. He remarked that in many countries of the region, more than half of adolescents are overweight or obese.



Medical expertise federated under French healthcare brand in Dubai

Around 110 French companies will be exhibiting at the largest health show in the Middle East with 30 of them will be in Dubai for the first time. For the 2019 edition of the French pavilion, Business France, the agency supporting the international development of the French economy will launch the French Healthcare brand, an innovative initiative aimed at bringing together French companies, researchers, and healthcare professionals to jointly promote their activities internationally.



m, French expertise will embrace a wide range of fields: from orthopedics to rehabilitation, sterilization, waste treatment, remote medicine solutions, furniture and equipment for hospitals, implantable medical devices, medical measuring instruments. The collective brand French Healthcare has the ambition to build momentum through a collective approach so as to boost the influence of French health expertise and technologies.

In 2017, the French medical devices market posted $\[\le 28 \]$ billion, earned by more than 1,300 companies, of which 92 per cent are SMEs. The industrial sector generates 85,000 jobs in France. Growth in the sector is fueled in large part by export, an area in which turnover is growing by 5 per cent per year.

France offers tremendous potential for innovation in the medical devices sector thanks to recognized industrial, scientific and medical expertise. The medical devices sector stands out for its three-pronged growth model: "reasoned innovation / internationalization / external growth", with exports as the main driver, in light of the obstacles on the domestic market. In this respect, innovation remains of central importance to these companies. It is illustrated by a desire to develop solutions that integrate new functionalities, in particular developed from e-health technologies.



With the support of Sanofi, FedEx and regional partners from France such as Bretagne Commerce International, DEV'UP, Lille Eurasanté and Medicalps, the French Pavilion will give center stage to the latest innovations at the 2019 edition of Arab Health. Their technical nature meets the expectations of the very demanding and rapidly-developing local market.

Jean-Paul Scheuer, Country Chair & General Manager, Sanofi Gulf commented: "Delivering innovation in healthcare that will truly benefit patients and improve care is one of the main commitments at Sanofi. I believe that partnerships are vital to realizing this, and the Arab Health conference is a great platform to meet likeminded organizations to exchange insights and experiences and explore potential collaborations. We are always pleased to work with partners who share the same values."

The most represented sectors on the French Pavilion are:

- Hospital equipment and furniture: medical beds, trolleys, wheelchairs, operating lamps, ergonomic chairs, gynecological examination chairs.
- Prevention and risk management in hospitals/ hospital hygiene: Equipment sterilization and disinfection, air treatment and purification, hospital waste management, ventilation system, effluent decontamination.
- Diagnostics: ultrasound diagnostic equipment, sonography equipment, Doppler, endoscopes, radiography units.
- Telemedicine solution: patient monitoring, transmission of medical information.





Arab Health welcomes global healthcare sector to Dubai



Healthcare and trade professionals from more than 160 countries are expected to arrive in Dubai for the opening of Arab Health Exhibition & Congress, the largest gathering of healthcare companies, technology, products and services in the Middle East. Following the success the 2018 edition, where over \$778 million worth of business was generated by exhibitors, it is expected that more than 84,500 healthcare and trade professionals and 4,150 exhibiting companies from 66 countries will convene from 28–31 January 2019.

"For 44 years, Arab Health has brought the latest innovations in healthcare. From state-of-the-art imaging equipment to the most cost-effective disposables, and to developments in surgery and advances in prosthetics, Arab Health is an essential part of the yearly healthcare trade show calendar," said Ross Williams, Exhibition Director, Arab Health.

"The show is an opportunity for purchasers to get ahead of the upcoming year's product needs and to secure the best deals, while dealers and distributors come to Arab Health looking to expand their product portfolios or supply the next 'big product' to their country," he added.

With over 39 confirmed country pavilions, Arab Health provides an important platform for the Middle East's healthcare industry to build relationships with international stakeholders and facilitates the exploration of new business opportunities in the global healthcare field. More than a hundred new exhibitors are set to make their debut this year including Health Insights, Polish Ministry of Entrepreneurship and Technology, Technogym, Mediform, Luxembourg Ministry of the Economy, MirambeauAppCare, Khushi Baby and Royal Health Group, to name a few.

As innovation continues to create vast new possibilities and opportunities for the region's healthcare sector, Arab Health will introduce a dedicated Innovation Hub located in the Plaza Hall, to highlight some of the technological advances and innovations that are driving the industry forward. As well as the Innovation Showcase - a dedicated showcase area in the Innovation Hub for start-ups, SMEs, and innovators to demonstrate their "future-shaping" new products – the

Innov8 Talks will provide a platform for start-ups and entrepreneurs to present their healthcare innovations to



a panel of industry experts and potential investors. Visitors are invited to attend these sessions to see who will be the best pitch of the day and to learn more about the latest products changing the healthcare industry.

The Innovation Hub will also include a dedicated 3D Medical Printing Zone, hosted in partnership with the Dubai Health Authority and Immensa Technology Labs. Visitors are welcome to see live 3D Printing of medical models in FDM technology and sample models of prosthetic, orthotics, anatomical models, dental models and surgical guides.

Additionally, this year will debut the Experience Zone, powered by Morph Technologies. This new zone, located in Za'abeel Hall 4, will be an opportunity for visitors take a break from the busy exhibition to try out some of the latest innovative technologies in healthcare such as using Augmented and Virtual Reality to take a look at 3D organs or enjoying some friendly competition with our mind control EEG car race, for example.

Key global manufacturers are also utilizing the upcoming edition of Arab Health to showcase innovation in the fields of technology, business operations and patient care. According to Salah G. Malek, President, Middle East and Africa, Getinge: "Innovation will continue to drive development in the sector, both in terms of technology and business models, but also when it comes to setting the organisation in the best way to increase efficiency in the patient flow. Arab Health provides Getinge with the opportunity to share technologies and services with existing and potential new customers and it also allows us to discuss the challenges in the region and what we need to do to address them moving forward."

Accompanying the exhibition is a number of business, leadership and Continuing Medical Education (CME) conferences and workshops providing the very latest updates and insights into cutting edge medical procedures, techniques and skills. The Arab Health Congress will feature

11 CME-accredited medical conferences and more than 4,500 delegates and 300 international and regional speakers will be welcomed over the four days of the congress.





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Sultan Qaboos University Hospital Patient Services Department:

Tel: 00968 - 24415747 Operator: 00968 - 24413355 extension 4625 during working hours

www.squ.edu.om

Lama Polyclinic

Tel: +968 24799077

www.lamapolyclinicoman.com

Muscat Private Hospital

Tel: (+968) 24583600

www.muscatprivatehospital.com

Apollo Medical Center

Tel: (+968) 24787766 / 24782666 / 24787780

www.apollomuscat.com

Sultan Qaboos Hospital (Salalah)

Tel: +968 2 321 1555



Adam Hospital

Tel: +968-244-25434055

Al Buraimi Hospital Tel: +968 25652319

Al Nahdha Hospital Tel: +968 24837800

QATAR

Al Khor General Hospital

Tel: +974 4474 5555

Children's Emergency Centre (Al Sadd)

Hotline: +974 4439 6059; +974

4439 2948

Al Amal Oncology Hospital (cancer treatment)

Tel: +974 4439 7800

Hamad General Hospital (includes Accident and

Emergency)

Tel: +974 5584 7803

Rumailah Hospital

Tel: +974 4439 3333 www.hmc.org.qa/en/

Al Ahli Hospital

Tel:+974 4489 8888 www.ahlihospital.com

Al-Emadi Hospital

Tel: +974 4466 6009 www.alemadihospital.com.ga

UAE

PUBLIC HOSPITALS

Rashid Hospital Dubai

Tel: 04-2192000

Dubai Hospital, Dubai

Tel: +971- 4-2195000; 04-2714444

dhweb@dohms.gov.ae

Latifa Hospital, Dubai

Tel: 04-2193000

Al Maktoum Hospital

Tel: 04-222 1211

Al Amal Hospital, Dubai

Tel: 04-344 4010 **Hatta Hospital** Sha'biah, Hatta, UAE Tel: 04-2195000: 04-814 7000

Police Post-Shaikh Khalif Hospital, Ajman

Call: 06 7050231

www.ajmanpolice.gov.ae

PRIVATE HOSPITALS

Al Amanah Medical Center

Sharjah

Tel: 06 5615545

www.alamanahmedicalcenter.com

American Hospital Dubai

Tel: +971 4 336 7777 – Oud Metha +971 4 336 7777 – Dubai Media

City

Salama Hospital, Abu Dhabi

Tel: 02 6966777

Dibba Fujairah Hospital

Tel: 09 2446666

Near Dibba Police Station, 10

Dibba, Fujairah

Al Sharq International Hospital

Tel: 09 2249999

Burjeel Hospital

Tel: 04 4070100

joseph.karama@amberclinics.com

Mediclinic Welcare Hospital

Tel: - 04-282 7788

Lifeline hospital (Jebel Ali Hospital)

Tel: 800 4677 4825 (toll free),

 $+971\ 4\ 8845777$

Iranian Hospital

Tel: 04-344 0250

Belhoul Speciality Hospital Tel:

+9714-2140399, +9714-2733333,

+9714-2140257

Medcare Orthopaedics and Spine Hospital

Tel: - 04-3768 400

Canadian Specialist Hospital

Tel: +9714-336 4444,

+9714-7072222

Mediclinic City Hospital

Tel: +971 4 435 9999

Cedars Jebel Ali Hospital

Tel: +9714-8814000, +9714-8818816

Neuro Spinal Hospital

Tel: +971 4 3420000 +971 4 3157777

Zulekha Hospital

Tel: - 6005 24442; +9714-2678866

Al Zahra Private Hospital

Tel: +971 6 516 8902 / 7081

Royal Hospital

Tel: +971 6 5452222

Central Private Hospital

Tel: 06-563 9900

PHARMACIES

Aster Pharmacies

Toll Free# 800-700-600 Head Office: +971 4 3092900

Life Pharmacy, Dubai Branch

Tel: 04 222 5503

Makkah Pharmacy - Sharjah

Call: 06 565 6994

OPEN 24 HOURS

Police

999

Dubai Police Call Centre

901

Dubai Police (Non-Emergency)

Tel: 04-609 6999

Sharjah Police

Tel: 06-563 3333

Ajman Police

Tel: +971 6 740 9999

Fujairah Police

Tel: 09-222 4411

Ras Al Khaimah Police

Tel: 07-235 6666

Umm Al Quwain Police

Tel: 06-765 6677

Directory Enquiry Services

Etisalat - 181 Du - 199

Disclaimer: Contact details in this section are for reference only. For any inquiries, please get in touch with the relevant authorities and entities directly as the contact details such as telephone numbers, email IDs and website addresses may change in time.







Int'l Dental Conference & Arab

Dental Exhibition 5-7 February Dubai, UAE aeedc.com

Innovation Arabia

10-12 February Dubai, UAE innovationarabia ae

Arab International Paediatric Medical Congress

14-16 February Dubai, UAE https://tinyurl.com/yakt3mng

Nursing Care Conference

15 February Al Ain, UAE https://mco.ae

Hepatology and Fatty Liver Disease

22 February Abu Dhabi, UAE https://focus-gulf.com

World Congress on Traditional & Complementary Medicine

22-23 February
Abu Dhabi, UAE
https://traditionalmedicine.pha
rmaceuticalconferences.com

International Family Medicine Conference & Exhibition

25-27 February Dubai, UAE ifm.ae

Int'l Pharmaceuticals & Technologies Conference

26-28 February Dubai, UAE duphat.ae

Int'l Humanitarian Aid & Development Conference

12-14 March Dubai, UAE dihad.org

SEHA International Radiology Conference

15-16 March Abu Dhabi, UAE http://sirc2019.com

World Congress on Depression

18-19 March Dubai, UAE https://orthopaedics.healthconf erences.org

Middle East Heart Congress

18-20 March Dubai, UAE heart.cardiologymeeting.com

Dubai World Dermatology & Laser Conference

18-20 March Dubai, UAE index.ae

Upper Limb Update Conference

22 March Abu Dhabi, UAE https://mco.ae

Multiple Sclerosis

Congress 31 March Abu Dhabi, UAE https://mco.ae

Annual Health Systems Workshop

31March-1 April Dubai, UAE

Emirates Critical Care

dhfmr.hms.harvard.edu/events

Conference
4-6 April
Dubai, UAE
http://www.eccc-dubai.com

Abu Dhabi Pharmacy Conference (ADPhaC)

25-26 April Abu Dhabi, UAE http://adphac.ae

Obesity Conference

11-12 October Abu Dhabi, UAE https://adoc-conference.com

Annual Radiology

Meeting 15-17 October Dubai, UAE index.ae

International Aesthetic Dental Conference

24-26 October Dubai, UAE index.ae



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