Vol. 05, Issue 03, No. 27, May-June 2021 **EDUCOREDO REDO** Middle East

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Feature

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Healthcare destination

Positive growth in the US medical technology sector

Digital transformation INPLASTIC SURGERY

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PO Box: 9604, SAIF Zone, Sharjah - UAE Tel: +971 6 557 9579, Fax: +971 6 579569, info@7dimensionsmedia.com www.7dimensionsmedia.com

Chief Editor

Ayesha Rashid ayesha@mediworldme.com

Editor

Rustu Soyden rustu@mediworldme.com

Contributors

Nirmala Rao

Sales & Marketing

Israr Ahamed israr@7dimensionsmedia.com

Tousif Ahmed tousif@7dimensionsmedia.com

Head Operations

Mohammad Karimulla karimulla@7dimensionsmedia.com

Creative Director

Mohammed Imran imran@7dimensionsmedia.com

Photo Journalist

Wasim Ahmed wasim@7dimensionsmedia.com

World wide Media Representatives

France, Belgium, Monaco, Spain: Aidmedia, Gerard Lecoeur; Tel: +33(0) 466 326 106; Fax: +33 (0) 466 327 073 India: RMA Mesia, Faredoon Kuka; Tel: +91 22 55 70 30 81; Fax: =91 22 5570 3082 Taiwan: Advance Media Services Ltd, Keith Lee; Tel: (886) 2 2523 8268; Fax: (886) 2 2521 4456 Thailand: Trade and Logistics Siam Ltd, Dwighr A chiavetta; Tel: +66 (0) 2650 8690; Fax: +66 (0) 2650 8696 UK, Ireland, germany, Switzerland, Austria: Horseshoe Media, Peter Patterson;

Tel : +44 208 6874 160

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Editorial

Popularity of plastic surgery in our era

In the 2000s, plastic surgery has enjoyed an explosion in popularity, and medical advances have made possible reconstructive feats that were once only a dream of what might one day be. In this age of accelerated communication, the internet and television have gotten in on the game, and we can now view just about any kind of plastic surgery procedure from the comfort of our own homes.

Currently, the most important trend in plastic surgery is a move toward less invasive procedures designed to stave off the visible signs of aging. In fact, the most popular procedures at this time entail the use of injectable substances, such as facial wrinkle fillers and, most notably, Botox. It is estimated that there are over 1.1 million Botox injections administered in the US every year, and that number is steadily growing.

In our this month's cover story we talk with Dr. Andre Mattos, from Dynasty Clinic who tells us in detail how technology is transforming the plastic surgery industry.

Originally created for an actor in 1928, dental veneers are now an integral part of dentistry today.

If you have crooked, stained or discolored front teeth then the simple application of veneers brings about magical transformation. Your looks and smile improve dramatically.

Dental veneers were first developed by Californian dentist Charles Pincus in 1928 to change an actor's appearance in a film shoot. Unfortunately, even though he continued to develop his idea through the 30's, he lacked a cement or bond that would hold them in place for any reasonable length of time. Dentist Kapil Khurana shares his ideas about cosmetic dentistry and his expansion plans in the UAE.

The USA is easy to reach, with a huge choice of flights from locations all over the world and it's easy to get around once you are there. Medical tourists receive a warm welcome and can tap into the availability of new and cutting edge treatments. The USA is a highly advanced nation with a culture that fosters progress, research and discovery. For this reason, the USA leads the world in medical treatments, with new and advanced techniques, drugs and procedures often available there before they are available anywhere else. We explore USA in our medical destination section.

As always we are always open for your feedback, and if you would like to be featured in our magazine you can get in touch with me at ayesha@mediworldme.com. We are also spread across all major social media channels (Facebook, Twitter, LinkedIn and Instagram) so be sure to LIKE and FOLLOW us there as well.

Sincerely,

Ayesha Rashid Chief Editor, *MediWorld ME*













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Digital transformation in Plastic Surgery industry

"Over the past few years, the specialty has evolved not only from a scientific point of view, but also in quality with the demand for increasingly better results. This change reflects the greater exposure of patients to digital media. Today we have several new technologies available, such as Vaser and Rennuvion, used in body contouring surgery for example. It is always good to point out that before any surgery, expectations have to be aligned. The patient has to understand the existing limitations in his case. It is very common that patients research on the internet creating hope for easy or impossible solutions. It is up to the surgeon during the consultation to clarify these issues," says Mattos







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lastic surgery has always been a technique- and technology-driven surgical discipline, given that there is no regional anatomic focus. There has been a remarkable evolution in technique over the last 25 years with an increased understanding of

anatomy leading to a whole host of new and more reliable flaps, which has transformed reconstructive surgery, breast reconstruction being one notable example. The development and maturation of microsurgery has led to the full fruition of anatomic principles. With better understanding of blood supply to the skin, fascia, muscle and bone, many traditional reconstructive procedures are constantly being superseded by the new, ingenious use of various tissue flaps.

The global plastic surgery market is likely to gain traction from the everincreasing number of patients undergoing procedures, such as chin augmentation, breast reduction, and breast augmentation. The American Society for Aesthetic **Plastic Surgery** (ASAPS) declared that in 2018. breast reduction (18%) and chin augmentation (20%) were two of the most popular surgical procedures in the US. This information is given by Fortune Business Insights in a recent report. The report further states that the plastic surgery market size was \$50.67 billion in 2018 and is projected to reach \$66.96 billion by 2026, exhibiting a CAGR of 3.6% during the forecast period.





body contouring surgery for example. It is always good to point out that before any surgery, expectations have to be aligned. The patient has to understand the existing limitations in his case. It is very common that patients research on the internet creating hope for easy or impossible solutions. It is up to the surgeon during the consultation to clarify these issues.

The evolution was also due to the globalization of economies. Today we can easily move around the globe. Likewise trends are spreading. The desire to have bigger, more defined lips common in Dubai quickly arrives in other countries. And other trends are brought to Dubai.

The pandemic has also brought great changes with the popularization of digital consultations. Today it is very common for me to consult someone at my Clinic in Brazil and operate this patient in Dubai.

The safety of procedures has also taken a leap in recent years with new drugs and equipment used in Anesthesiology.

Regarding non-invasive outpatient procedures, the evolution is amazing. While we are talking here a new filler or a new toxin is being developed.

Can you elaborate about the surgeries which are in demand in Dubai currently?

Dubai is an icredible city! With so many nationalities living in harmony, we have patients for all procedures. Undoubtedly, body contour is always on the rise. HD liposuction the most wanted at the moment is very much in demand, but it is not for any patient. There are precise indications, which, when followed, bring spectacular results.

The pandemic has also brought changes in this regard. The use of a mask made the look more evident, with an increase in eyelid surgeries. In addition, people began to perceive themselves more with so many video conferences. This brought a boom in

defects, improvements in appearance and restoration of lost function. The first recorded account of reconstructive plastic surgery was found in ancient Indian Sanskrit texts, which described reconstructive surgeries of the nose and ears. The global plastic surgery market is likely to gain traction from the everincreasing number of patients undergoing procedures, such as chin

increasing number of patients undergoing procedures, such as chin augmentation, breast reduction, and breast augmentation. The American Society for Aesthetic Plastic Surgery (ASAPS) declared that in 2018, breast reduction (18%) and chin augmentation (20%) were two of the most popular surgical procedures in the US. This information is given by Fortune Business Insights[™] in a recent report. The report further states that the plastic surgery market size was \$50.67 billion in 2018 and is projected to reach \$66.96 billion by 2026, exhibiting a CAGR of 3.6% during the forecast period.

Ayesha Rashid met with Dr. Andre Mattos, from Dynasty Clinic who tells us in detail how technology is ransforming the plastic surgery industry?

How has Plastic Surgery evolved over the years?

The name 'plastic' derives from the Greek, 'plastikos', which means to mold, to model. As, initially, techniques were used to remove tissue from a part of the body to restore the functions of organs and other tissues, and with an exclusively reparative purpose. Cosmetic surgery is referred to as the evolution of reconstructive plastic surgery. Once they realized that they could manipulate tissues to heal devastating wounds and restore a 'normal' appearance, plastic surgeons began manipulating tissues in 'normal' people to seek a better appearance, thus creating aesthetic plastic surgery.

Over the past few years, the specialty has evolved not only from a scientific point of view, but also in quality with the demand for increasingly better results. This change reflects the greater exposure of patients to digital media. Today we have several new technologies available, such as Vaser and Rennuvion, used in











facial surgery. Rhinoplasties are also being requested more because of this exposure. In addition, the Emirates, as I said, are home to so many different ethnic groups making popular different types of procedures.

The social pressure to get out of the pandemic as a better version of yourself seems to have resulted in stigma for those who have not used the time for selfimprovement. With messages of improvement expanded on social media on how to stay in shape, stay productive some people have taken more drastic measures to keep pace. That is why we are seeing such a rise in plastic surgery.

Breast surgery is always very much demanded, either to decrease or increase it. The use of breast implants is popular around the world, improving the selfesteem of many women.

We cannot forget to speak of the great demand for surgery by men. In the recent past, they accounted for perhaps 10% of surgeries. Today 40% of my patients in Dubai are men.

The WHO establishes that the concept of health is organic and psychological wellbeing. Plastic surgery helps to achieve this balance.

Where does Dynasty Clinic stands out from the others in providing these services? Our Clinic seeks excellence in everything it does and it could not be different in plastic surgery. In addition we have a team behind so that the patient's experience is the best. New facilities, dedicated staff and everything for the patient's health. Not only in plastic surgery, quality dentistry and physiotherapy as well. Without false modesty, the best in Dubai.

Dynasty Clinic is a unique and complete skin, hair care and Physiotherapy clinic located at Jumairah area in Dubai. Everyone desires beautiful skin, irrespective of age and gender. And, we at Dynasty Clinic understand this aspiration of having flawless beauty. Today in this fast developing world one can see the drastic changes in the very looks of men and women.

What is the cost involved in these surgeries?

Knowing how much plastic surgery costs is one of the main concerns for patients looking for clinics and professionals to perform procedures such as silicone implants, abdominoplasty or rhinoplasty, to name a few. The price of plastic surgery, however, should not be the main criterion for making this decision, after all, your satisfaction is worth much more than the amount that will be invested in the procedure.

When you think about health, price must be secondary. The costs may vary between patients, being submitted to the same surgery, since difficulty varies between cases.

The hospital cost also varies depending on the hospital chosen. Consultation is essential to elaborate this.

Can you please comment on the popularity of plastic surgery in the coming years?

There is a discussion nowadays, mainly among younger professionals, about the difficulty of the plastic surgery market. Other specialties are taking over areas of the specialty, mainly cosmetic surgery. Regulatory bodies have the role of bringing responsibility to each professional who performs treatments without training or technical conditions.

I have a few observations about this. First about the new culture of training, teaching and learning, which has undergone changes with the arrival of the internet. Today, all in real time, people are beginning to feel that they do not need time to mature and build a learning curve. Everything comes with a certain time, it is not automatic like the internet. Knowledge is different from experience and understanding. Dexterity and skill improves over time.

This new perspective of formation distorts the specialties themselves. Many professionals have no experience, not even in the specialty in which they graduated, but they are already able to perform procedures in another specialty. We can say that many plastic surgeons also get involved in other areas.

I understand that over time plastic surgery will not lose its space, but it will remain as it always has been, a resource for other specialties, when they understand that they are unable to solve the problem. What will happen is the number of patients with undesirable results will increase, as a greater number of untrained professionals will get their hands on the specialty. The truth is that we will have a greater number of revisions. We already see several patients looking for plastic surgeons in order to





solve sequels left by other specialists.

Those who will stay are the professionals who have their feet on the ground and the view that the specialty has always been like this. I don't believe that this will change. After all what matters is the background of the surgeon. I am in this area for 25 years. A long time no?

Does your plastic surgery involve tissue engineering? Tell us about that?

We can use some matrices for breast reconstruction for example. And more recently new studies are on the way. The recent discovery that adult tissues have stem cells capable of pluripotential uses initiated a series of researches. Plastic surgery recently aroused interest in the subject, and participates in stem cell research from the moment that adipose tissue and skin have become sources of obtaining and differentiating stem cells, opening new perspectives of treatment for congenital and acquired deformities, with a reparative purpose or aesthetics. The future will bring more options for sure.

Do you use computer assisted imaging? If so, does it provide bigger and better results to your patients?

With the advancement of technology, we have a state-of-the-art 3D scanning and simulation system.

It is the alignment of the customer's needs with the worldwide design and the latest 3D image capture and computing technologies. The result is a functional art that brings the best of high technology to daily practice, facilitating the client's choice. This lessens patients' anxiety and fears. The problem is that frustrations might increase since it is not always possible to reproduce in vivo exactly what is seen in the computer.

The 3D imaging should be used carefully. It is necessary to explain the patients about the limits of each procedure.

In your opinion what could be the future of plastic surgery in terms of technology? How much will it evolve in the future?

advancements are fundamental for all sectors of society, including in the areas of health and plastic surgery. Recently, several news reports have shown the positive impact of new tools and resources in the search for better quality of life and health of people, such as the use of 3D printers in reconstructive plastic surgery. Another novelty promises to positively impact the specialty: robotic surgery. Technology is still too expensive to be accessible to the general public. In Brazil there are about 12 robotics equipment, but none of them are used for plastic surgery. The number should increase as usage improves and consolidates. A natural doubt when dealing with the subject is the possible replacement of plastic surgeons by machines when carrying out procedures. This scenario is unlikely to come true. Despite the name robotics, there is no artificial intelligence commanding the robot. In this case, it is just the extension of the specialist's arm.

The operator is the plastic surgeon and not the robot, which is actually a high-tech surgery machine. The surgeon initiates the surgery by conventional methods and installs the robot's arms in the surgical field and then sits on the console and directs and commands all movements. The robot has no autonomy of movement or creativity. It is the surgeon with his experience and art who performs the surgery.



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Dr. Kapil Khurana: Pioneer of Cosmetic Dentistry

The global cosmetic dentistry market size was valued at \$23.02 billion in 2018 and is projected to reach \$43.06 billion by 2026, exhibiting a CAGR of 8.0% during the forecast period (fortune business insights)

Dental veneers are thin, toothcolored shells

they are attached to the front surface of teeth to improve their appearance. They're often made from porcelain or resincomposite materials and are permanently bonded to your teeth. Veneers can be used to treat a number of different cosmetic concerns, including chipped, broken, discolored, or smaller-than-average teeth.

Some people may only get one veneer in the case of a broken or chipped tooth, but many get between six to eight veneers in order to create an even, symmetrical smile. The top front eight teeth are the most commonly applied veneers.

Dental veneers are most commonly made out of porcelain. Applying

traditional dental veneers requires more intensive prep work compared to alternatives that are sometimes called "no-prep veneers." These no-prep veneers — which include options like Lumineers and Vivaneeres — take less time and are less invasive to apply.

Applying traditional dental veneers typically involves grinding down the tooth structure, sometimes removing some of the tooth even past the enamel. This

hereby certifies that Kapil Khurana, MDS

is a professional dedicated to the highest levels of excellence in the art and science of cosmetic dentistry in accordance with the code of ethics upon which this organization was founded.

Salvatore Lotardo, DDS, AAACD, President

Barbara J. Kochelski, CAE

Barbara Kachelski, CAE, Executive Director

Membership Renewal Date: 1/31/2020

allows for proper placement, but it's also an irreversible procedure that can be painful to go through and often requires a local anesthetic.

No-prep veneers, on the other hand, may require some tooth preparation or alteration, but these alterations are minimal. Instead of removing layers of tooth under the enamel, no-prep veneers only affect the enamel. In many cases, no-prep veneers don't require local anesthetics.

Veneers are not the same as tooth implants or crowns. Veneers cover the front surface of the tooth. Implants, on the other hand, replace the entire tooth. Crowns also encase the entire tooth, while veneers only cover the front surface of the tooth (which is visible with a smile).

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From a modest beginning in India to Russia and now to UAE Dr. Kapil Khurana has come a long way. Having studied dentistry in Russia where he learnt the finer techniques of dentistry, he now is helping people improve their smiles in the UAE.With so much going on in the world of cosmetic dentistry Dentist Kapil Khurana shares his ideas about cosmetic dentistry and his expansion plans with Mediworld's editor Ayesha Rashid.

You have traversed a long way can you throw some light on this illustrious journey, how difficult the journey was and what challenges you faced?

Ifinished BDS from Russia in 1997 and later on went on to do MDS in 2001. For a long time I worked as a dentist therapist and prosthodontist. Since 2013 I am engaged only in cosmetic dentistry.

Feature

You ventured into the field of cosmetic dentistry decades back how have these sectors evolved over these years?

Cosmetic Dentistry sector across the world has evolved dramatically over last few years. The patients want quality services which were till a few years back lacking, seeing this demand I ventured into this field and went international. Earlier the patients used to go in for braces and orthodontics but in today's age cosmetic dentistry has given people a chance to improve their smile without using braces and Orthodontics.

Can you throw some light on the latest technology which is being used in the dentistry currently?

Regarding health and longevity of teeth earlier for doing more or less esthetic job the cutting of tooth should have been 1-1.5 mm from each side and the dentist was forced to go for RCT. Latest technologies allows us, to cut 0.3-0.5 mm or sometimes it's possible to go for no-prep veneers which means that we can fix veneers without any cutting, which means that there's no need for RCT and it's very good for the health of tooth.

You are known for your community service initiatives can you please tell us more about few CSR projects which are close to your heart?

I believe in giving back to the society and I have been involved with a few CSR projects of late. I have been associated with many charity organizations and conduct free dental checkups for the poor and the needy patients across the globe. I have a charity find and it is named as The Charity Fund of Dentist Kapil Khurana Moscow.

What is your USP? Can you please tellus.

I am a member of American Academy of Cosmetic Dentistry (AACD) and European Society of Cosmetic Dentistry (ESCD). I have undertaken basic courses of physiology from Oxford. I perform miracle with a smile of patient without using braces within 3-4 sittings.

Karim Amer SVP, Head of Healthcare and Education Mashreg Bank

Surge in medical devices driving growth in the GCC healthcare sector

The strength of rebound at 5.8% suggests that healthcare growth is on track to return to pre-Covid levels - between 2010 and 2020, the GCC region had the highest healthcare infrastructure investments with a major increase in the number of hospitals and beds. The number of hospitals almost doubled in most countries, and at least 80% of the hospitals and primary care clinics built in the GCC were driven by government initiatives and expansion plans (Mashreq & Frost & Sullivan)

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This is the industry analysis from Mashreq, one of the leading financial institutions in the UAE, and the research firm Frost & Sullivan.

According to the report, GCC hospital revenues are predicted to grow by 5.8% in 2021.

The strength of rebound at 5.8% suggests that healthcare growth is on track to return to pre-Covid levels - between 2010 and 2020, the GCC region had the highest healthcare infrastructure investments with a major increase in the number of hospitals and beds. The number of hospitals almost doubled in most countries, and at least 80% of the hospitals and primary care clinics built in the GCC were driven by government initiatives and expansion plans.

Hospital revenues

Hospital revenues heavily impacted by a Covid-induced drop in outpatient visits and elective surgery volumes are forecast to bounce back strongly in Q1 and Q2 2021 in most GCC countries.

Karim Amer, SVP, Head of Healthcare and Education, Mashreq Bank, said: "The Mashreq-Frost & Sullivan report indicates that the GCC healthcare sector is on the cusp of a promising recovery, with clear evidence of growth in domestic drug manufacturing to bring down the portion of imported medicines, and the enormous scope for technological investment – particularly in AI, analytics, electronic health records and robotics. For investors and innovators within the healthcare ecosystem, the Gulf is unquestionably full of opportunity. Increasingly digital opportunities are driving new trends - for example, soaring demand for e-commerce services will most likely result in a doubling of e-commerce providers by 2030. This shift to digital health will only continue to emerge in prominence moving forward."

According to the report, one of the challenges the GCC healthcare sector faces includes a dependency on imports of drugs and medical devices, which significantly hampered healthcare spending last year. In the US, for example, 70% of drugs in use are generics, while it is only 30% in the GCC. Additionally, healthcare digitization is still limited in the region, with most applications still at a pilot stage.

Private sector expenditure has also been less than 12 - 30% across GCC countries, placing a significant burden on the public healthcare system.

Conversely, however, there remain many growth opportunities, with many of these issues already being addressed by regional Governments. According to the report,

Feature

digital infrastructure will be high on the agenda of both the public and private sectors, and virtual care, remote patient monitoring, and artificial intelligence (AI) are likely to account for 30% of hospital investments from 2023 to 2030.

Current healthcare trends

Trends such as home healthcare will be the new focus area for logistics companies, while primary care clinics, e-clinics and micro-hospitals will represent new areas of investment focus over the next decade. Public-private partnership opportunities will also support growth across the GCC in the future – with 40% of private sector healthcare growth being driven by such partnerships.

Additionally, pharmaceutical manufacturing is expected to become an \$8 billion to \$10 billion market in the GCC in the next few years; and about 25% of multinational manufacturers have already initiated discussions with local companies to collaborate and develop drugs in the region. Notably, monoclonal antibodies and next-generation sequencing solutions are also emerging growth areas in the life sciences industry and are expected to create a \$7-\$10 billion market in the Mena region in the next two years.

Highlighting specific opportunities for growth within the GCC, Amer added: "While the UAE focuses on domestic pharmaceutical manufacturing and innovation, Saudi Arabia will spend big on nationwide infrastructure, and Bahrain will seek to attract large numbers of medical personnel to meet its growing demand for high-quality medical services. Like all GCC countries, Bahrain is very likely to see its medical devices market increase by 25% to 30% in 2021 as the number of elective surgical procedures increases."

Specialized services growth

Whilst there is clear growth in the development of nonspecialized healthcare infrastructure, market dynamics across the entire GCC region point towards a significant opportunity for investment in specialized surgeries, tertiary hospitals and highly specialized clinics to treat chronic ailments, cancer and primary healthcare facilities, in addition to growth in specialized outpatient facilities such as diabetes treatment clinics, wellness centers and aesthetic procedures - with diabetes proving to be a growing problem in the region.

The Frost & Sullivan / Mashreq report points towards growth in cancer cases linked to steady ageing of populations in the region. In Saudi Arabia, 70% of the population is over 40 years of age. Statistics show that in a country with at least 40% of the

MEDIWORLD Middle East

population older than 40, the risks of the onset of major chronic diseases is very high. It is estimated that new cases of common cancers are likely to increase to 150,000 by 2025 in Saudi Arabia, with 30,000 annual deaths by 2025.

This points towards a very clear need for additional specialized oncology services provision. There are opportunities for investment in cancer treatment services in all GCC countries, and, notably, the UAE is likely to become the regional hub for robotic surgery and cancer therapies by 2030. Investments in modern cancer treatment technologies are projected to triple in the upcoming decade. Investments to strengthen long-term care, home care, and palliative care will be imperative for the successful management of the healthcare needs of the elderly by 2055, with a notable shortage of such facilities in Saudi Arabia and Oman.

There is also a growing demand for long-term care facilities for those with chronic conditions and for the elderly right across the GCC. In Oman, 80% of the elderly require support for daily activities, and 60% of the elderly suffer from chronic disease in the country. The number of older people living in all Gulf countries is expected to rise exponentially over the coming decades.

GCC moving towards self-reliance

The UAE is expected to move towards greater self-reliance on domestically manufactured pharmaceuticals in 2021 and beyond. The nation imports products from about 72 countries, but ten countries account for 80% of the supply. There were around 18 UAE-based companies in 2017, with this number expected to increase to 30 by 2021.

Similarly, the number of international scientific offices is expected to grow from 30 in 2013 to 75 by 2021. The UAE is also the first country to develop an effective fast-track system for the registration of innovative drugs, allowing both UAE patients and those from neighboring countries seeking treatment to gain faster access to 'innovator drugs' inside the UAE.

Healthcare is one of the main focus areas of the ambitious Saudi Vision 2030 and National Transformation Program 2020 (NTP), which seeks to improve healthcare services and facilities across the Kingdom of Saudi Arabia. With a population forecast to grow from 34.3 million in 2019 to 39.4 million in 2030 and 45 million by 2050, the kingdom plans to invest SR250 billion on healthcare infrastructure by 2030 and aims to increase private sector contributions from the current 40% to 65% by 2030.

The report forecasts that private healthcare expenditure will increase from 30% in 2019 to 65% in 2030. An estimated 40 to 50% of this investment is likely to be on infrastructure until 2025 and on digital solutions and medical consumables and implants beyond 2025. Saudi Arabia is also poised to become a regional hub for medical consumables by 2023.

Bahrain is investing heavily in the digital transformation of healthcare services and delivery – with its nationwide drive towards healthcare digitalization likely to reach its peak within the next two-to-three years, attracting investments of around \$0.5 - \$0.6 billion by 2025. Robotic surgery offers investors untapped growth potential and is forecast to become a \$0.3 billion market by 2025.

Additionally, the medical devices, medical imaging, IVD, and digital health market in Bahrain was worth an estimated \$0.8 billion in 2019 and is currently growing at an annual growth rate of less than 6%. Value-added products, rather than domestic manufacturing, will create growth opportunities over the next five years and, as the government focuses on elder care, the adoption of related home care products and solutions is likely to increase by 2025.

The Mashreq-Frost & Sullivan report forecasts that Kuwait Vision 2035 is likely to boost investments in infrastructure development and upgrades. The public health system has huge opportunities in generics, which are forecast to account for 60% of pharmaceutical market revenues, with domestic manufacturers capturing 20% of that revenue. Domestic manufacturing of pharmaceuticals is also likely to gain momentum, increasing its contribution from current levels of 15% to 35% of the market by 2030.

Medical tourism is expected to gain prominence in Qatar & be a focal point for the government's strategy to diversify the economy away from oil. The Mashreq-Frost & Sullivan report forecasts that the private sector will play a bigger role in healthcare infrastructure & delivery in the future in Qatar, assuming a growing portion of the country's healthcare burden in the process. The establishment of new facilities is set to continue with several new hospitals and clinics under construction to meet the growing demand for specialized services. This is in line with the Ministry of Public Health's determined long-term target of reaching 5,700 hospital beds by 2033.

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Positive growth in the US medical technology sector

The US remains the largest medical device market in the world: \$156 billion (40 percent of the global medical device market in 2017). By 2023, it is expected to grow to \$208 billion. US exports of medical devices in key product categories identified by the Department of Commerce exceeded \$43 billion in 2018

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The United States of America, commonly known as the

US or America, is a country primarily located in North America. It consists of 50 states, a federal district, five major unincorporated territories, 326 Indian reservations, and some minor possessions. At 3.8 million square miles (9.8 million square kilometers), it is the world's third- or fourth-largest country by total area. With a population of more than 331 million people, it is the third most populous country in the world. The national capital is Washington, DC, and the most populous city is New York City.

The United States is a federal republic and a representative democracy with three separate branches of government, including a bicameral legislature. It is a founding member of the United Nations, World Bank, International Monetary Fund, Organization of American States, NATO, and other international organizations. It is a permanent member of the United Nations Security Council. Considered a melting pot of cultures and ethnicities, its population has been profoundly shaped by centuries of immigration. The US ranks high in international measures of economic freedom, reduced levels of perceived corruption, quality of life, quality of higher education, and human

rights. However, the country has received criticism in regard to inequality related to race, wealth and income, the use of capital punishment, high incarceration rates, and lack of universal health care.

The United States is a highly developed country, and continuously ranks high in measures of socioeconomic performance. It accounts for approximately a quarter of global GDP and is the world's largest economy by GDP at market exchange rates. By value, the United States is the world's largest importer and the second-largest exporter of goods. Although its population is only 4.2% of the world total, it holds 29.4% of the total wealth in the world, the largest share held by any country. Making up more than a third of global military spending, it is the foremost military power in the world and is a leading political, cultural, and scientific force internationally.

Healthcare in the US

Health care in the US is provided by many distinct organizations, made up of insurance companies, healthcare providers, hospital systems and independent providers. Health care facilities are largely owned and operated by private sector businesses. 58% of community hospitals in the United States are non-profit, 21% are government-owned, and 21% are for-profit. According to the World Health Organization (WHO), the United States spent \$9,403 on health care per capita, and 17.9% on health care as percentage of its GDP in 2014. Healthcare coverage is provided through a combination of private health insurance and public health coverage (e.g., Medicare, Medicaid). The United States does not have a universal healthcare program, unlike most other developed countries.

With global health care spending expected to rise at a CAGR of 5 percent in 2019-23 (deloittle), it will likely present many opportunities for the sector. While there will be uncertainties, stakeholders can navigate them by factoring in historic and current drivers of change when strategizing for 2020 and beyond. Among these drivers are a growing and aging population, rising prevalence of chronic diseases, infrastructure investments, technological advancements, evolving care models, higher labor costs amidst workforce shortages, and the expansion of health care systems in developing markets. Health care systems need to work toward a future in which the collective focus shifts away from treatment, to prevention and early intervention.

Outlook of medical technology industry in the US

The United States remains the largest medical device market in the world: \$156 billion (40 percent of the global medical device market in 2017). By 2023, it is expected to grow to \$208 billion. US exports of medical devices in key product categories identified by the Department of Commerce exceeded \$43 billion in 2018. The medical technology industry (commonly referred to as medical devices) consists of articles, instruments, apparatuses, or machines that are used in the prevention, diagnosis or treatment of illness or disease, or for detecting, measuring, restoring, correcting, or modifying the structure or function of the body for some health purpose. Typically, the purpose of a medical device is not achieved by pharmacological, immunological, or metabolic means (selectUSA).

The industry includes almost 2 million jobs in the United States, including both direct and indirect employment. Medical technology directly accounts for well over 300,000 of these jobs. More than 80 percent of medical device companies in the United States consist of fewer than 50 employees, and many (notably start-up companies) have little or no sales revenue. U.S. medical device companies are highly regarded globally for their

innovative and high technology products. R&D spending continues to represent a high percentage of medical device industry expenditures, averaging 7 percent of revenue. Compared to several other industries including automotive, defense, and telecommunications, the medical device industry invests a higher percentage of yearly revenues into product innovation, reflecting the competitive nature of the industry and constant innovation and improvement of existing technologies.

The medical device industry relies on several industries where the United States holds a competitive advantage, including microelectronics, telecommunications, instrumentation, biotechnology, and software development. Collaborations have led to recent advances including neuro-stimulators, stent technologies, biomarkers, robotic assistance, and implantable electronic devices. Since innovation fuels the medical device sector's ongoing quest for better ways to treat and diagnose medical conditions, when coupled with patient life expectancy increasing and aging populations globally, the medical device sector should continue growing at a positive rate in the future.

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Hexachromatic camera assisting with tumor imaging during surgical removal

Researchers at the University of Illinois Urbana-Champaign have developed a h e x a c h r o m a t i c camera that can assist with tumor imaging during surgical

removal. The device is inspired by the mantis shrimp which can perceive twelve colors, compared with just three colors that can be perceived by the human eye. The new camera can visualize tumors in the body during surgery when patients are administered near-infrared probes to label cancer cells. By seeing the entirety of the tumor and removing accurately around the margins, it should be possible to minimize surgical revisions and lower the chances of cancer recurrence.

Cancerous tissue can look much like the healthy tissue surrounding it, making it difficult to know which material to remove. Removing too much healthy tissue can cause consequences for patients, particularly when removing brain tumors, but leaving cancerous tissue behind leads to tumor recurrence, causing something of a conundrum for surgeons.

"Engineers spend incredible amounts of time and money developing the image sensors in cellphones," said Viktor Gruev, a researcher involved in the study. "When we are out on the town, these devices can capture pictures that are perfect for social media, but when doctors are examining patients, they don't care how nice the shot looks – they care how well the picture captures reality. The driving force in the camera market is simply incompatible with the technology required for medical diagnostics."

The compound eye of the mantis shrimp provided the inspiration for this latest technology. "The mantis shrimp has these incredible eyes," said Steven Blair, another researcher involved in the study. "Humans perceive three colors – red, green, and blue – because of a single layer of light-sensitive cone cells that line our retina, but the mantis shrimp perceives upward of 12 colors thanks to the stacks of light-sensitive cells at the tip of its eye. The mantis shrimp can thus see things that humans can't imagine – and it does so in a fraction of the space."

The hexachromatic camera employs optical filters and semiconductors to capture three colors of near-infrared light that would otherwise be invisible to a clinician. When combined with near-infrared probes that can be administered to patients, and which preferentially accumulate in cancer cells, the camera can help a surgeon to identify which areas of tissue are cancerous.

"The combination of this bioinspired camera and emerging tumor-targeted drugs will ensure that surgeons leave no cancer cells behind in the patient's body," said Goran Kondov, a surgeon who has tested the technology. "This additional set of eyes will help prevent recurrence of the disease, providing patients a quicker and easier path to recovery. And the device can potentially be manufactured at low cost since it is so simple, making it accessible to hospitals around the world."

Antibacterial hydrogel could kill antibiotic -resistant bacteria

Researchers at Chalmers University of Technology in Sweden have developed an antibacterial hydrogel that can kill antibiotic-resistant bacteria. The material is conceived as a wound dressing, and is composed of antimicrobial peptides which are naturally produced by the immune system. The gel binds the peptides together and protects them, yet allows them to still kill bacteria.

Antibiotic resistance is a growing crisis. Infections caused by resistant bacteria can be extremely difficult to treat and cause significant levels of suffering and death each year. If new treatments and technologies are not developed in time, then even undergoing routine surgery could become an unacceptably risky prospect without the means to prevent or treat post-operative infections.

To prevent this dystopian future, researchers are turning to new materials and techniques to kill these bacteria. The new hydrogel is a prime example.

"With these types of peptides, there is a very low risk for bacteria to develop resistance against them, since they

only affect the outermost membrane of the bacteria. That is perhaps the foremost reason why they are so interesting to work with," said Martin Andersson, a researcher involved in the study.

While the peptides are highly effective, they are also quite delicate and rapidly degrade when they come into contact with blood. This has been a major limiting factor for researchers who hope to use them as an antibacterial treatment. However, the Swedish researchers have discovered a way to protect the peptides while still maintaining their efficacy.

They bound the peptides within a protective hydrogel, meaning that they degrade much more slowly, and the resulting hydrogel is highly suited as a topical treatment for wounds. "The material is very promising. It is harmless to the body's own cells and gentle on the skin. In our measurements, the protective effect of the hydrogel on the antimicrobial peptides is clear – the peptides degrade much slower when they are bound to it," said Edvin Blomstrand, another researcher involved in the study.

The researchers have developed a spin off company called Amferia AB which is working on commercializing the technology.

MEDIWORLD Middle East

Researchers at Northwestern University have developed a series of soft sensors that can provide wireless monitoring of pregnant mothers during labor. The sensors are a replacement for the wires and belts typically used for monitoring during labor, and can send data directly to a clinician's smartphone, opening the possibility of remote monitoring in rural or low-resource settings, or even for home births during the current pandemic.

At present, clinicians monitor pregnant women during labor using a series of cumbersome belts and wires. These measurements include vital signs and data on the frequency of contractions, and are important to ensure that the mother and baby are safe. However, the devices can slip out of place and tether moms to their hospital beds, making it difficult to get up or move around.

"Pregnancy monitoring really hasn't changed for decades. Compared to some of the technology advances we see in cardiology or imaging, women's health has lagged behind," said Dr. Shuai Xu, a researcher involved in the study via a

Soft sensors for wireless monitoring of pregnant women during labor

Northwestern press release.

These new devices are wireless, and much less cumbersome. They include a soft and flexible monitor that adheres to the abdomen, which monitors the contractions and the baby's heartbeat. A second monitor, another small device, wraps around a finger to measure oxygen levels and peripheral temperature, while a third postage stamp-sized patch adheres to the chest and monitors the maternal heart and core temperature.

"Eliminating the wires not only increases the comfort and freedom of movement for the mother, but it also leads to more reliable data," said John Rogers, another researcher involved in the study. "The wires and the forces they impose on skinadherent sensors can be a significant source of electrical noise. We can remove that noise to yield improved data on the health of the mother and baby."

The research team has already deployed the monitors to lowresource areas in several countries, including Ghana and India. The devices can transmit their data to a smartphone, meaning that they are well suited for remote monitoring. "The beauty of the technology is that it can operate with a wide range of mobile devices without sacrificing accuracy," Xu said. "You don't need expensive equipment that requires a specialized engineer to install."

POSTECH develop new technique to treat cerebral aneurysms

Researchers at Pohang University of Science & Technology (POSTECH) in Korea have developed a new technique to treat cerebral aneurysms. **Described in journal Advanced** Materials, the treatment involves using a catheter to deliver an alignate hydrogel that is crosslinked in place within the aneurvsm using light. The hydrogel is not degradable and can reside within the body for extended periods. As an alternative to coil embolization, the hydrogel stabilizes the aneurysm and reduces the chance of it bursting.

Cerebral aneurysms form when a weak spot in a cerebral artery balloons out, putting pressure on nearby tissues. This ultimately poses a significant risk of a vessel bursting, which frequently proves to be fatal. At present, clinicians may treat such a n e ur y s m s through coil embolization, which aims to stabilize the aneurysm with platinum coils. The coils redirect blood flow and reduce pressure within the aneurysm. However, this procedure can be dangerous and can actually cause the vessel to rupture. The coils can also become detached from the vessel.

This new approach involves using an alginate hydrogel to embolize the aneurysm. Such a hydrogel must be liquid when delivered, as it must pass through a narrow catheter and then fill the aneurysm as required, before becoming semi-solid and remaining in place. However, in the tortuous and pulsating environment of a blood vessel, which is full of rushing blood, it can be difficult to control the gel behavior.

These challenges led to the

mechanism underlying this latest technology, which incorporates a lightresponsive gel which rapidly undergoes a covalent crosslinking reaction when exposed to light. The catheter delivery system incorporates an optical fiber that can deliver light as the gel is extruded, allowing fine control of gel deposition during the procedure. The gel is delivered as microfibers which fill the aneurysm and then undergoes a further ionic crosslinking reaction once in place because of the presence of calcium in the blood.

The gel is not degraded by the body and so should remain in place for a long time. It is also possible to load it with contrast agents so that it can be imaged, both during deposition and then afterwards to monitor whether it is still functioning correctly.

"This research is the first in the world to develop a method that can be used to treat aneurysms by microfibrillating a photocrosslinkable hydrogel microfiber in blood vessels," said Professor Joonwon Kim, a researcher involved in the study. "It is anticipated these materials will be effectively applicable to many vascular diseases requiring embolization."

Alberta researchers develop 3D print cartilage like materials containing human chondrocytes

Researchers at the University of Alberta have developed a method to 3D print cartilage-like materials consisting of a collagen hydrogel containing human chondrocytes. The printed structures mimic human nasal cartilage in terms of its mechanical, molecular and histological characteristics. The researchers hope the technology could lead to personalized cartilage implants for skin cancer patients who have nasal cartilage defects following surgery to remove their tumors.

The nose is a common site for skin cancer, and in many such patients, removal of the cancerous lesions will result in cartilage defects. At present, surgeons will remove cartilage from a rib and implant it in the nose in an attempt to correct such defects, but this approach has significant drawbacks.

"When the surgeons restructure the nose, it is straight. But when it adapts to its new environment, it goes through a period of remodeling where it warps, almost like the curvature of the rib," said Adetola Adesida, a researcher involved in the study. "Visually on the face, that's a problem. The other issue is that you're opening the rib compartment, which protects the lungs, just to restructure the nose. It's a very vital anatomical location. The patient could have a collapsed lung and has a much higher risk of dying."

This new approach avoids these limitations, and involves

harvesting a small amount of cartilage from the nose to e x t r a c t th e chondrocytes that reside within. These are then mixed with a collagen hydrogel and 3D printed into a custom shape that is

specifically designed to fill the cartilage defects of that patient.

"This is to the benefit of the patient. They can go on the operating table, have a small biopsy taken from their nose in about 30 minutes, and from there we can build different shapes of cartilage specifically for them," said Adesida. "We can even bank the cells and use them later to build everything needed for the surgery. This is what this technology allows you to do."

The printed structures are then cultured for a period of four weeks to allow them to mature, before they can be implanted. "It takes a lifetime to make cartilage in an individual, while this method takes about four weeks. So you still expect that there will be some degree of maturity that it has to go through, especially when implanted in the body. But functionally it's able to do the things that cartilage does," said Adesida.

The researchers are planning to test the implants in animal models and if this is successful they hope to proceed to a clinical trial. Hopefully a version of this technology can also lead to stronger cartilage-like materials that can be implanted within joints to replace injured or worn-out natural cartilage.

Sweat sensors measuring glucose levels on the skin and converts reading into accurate blood sugar estimates

R e s e a r c h e r s a t t h e University of California San Diego have developed a sweat sensor that measures glucose levels on the skin and converts those readings into accurate blood sugar estimates. As glucose levels in sweat can vary from person to person, the sensor

incorporates algorithms that personalize the measurement for each user, requiring finger-prick calibration once or twice each month.

The need for regular finger pricks is a barrier for many patients with diabetes in regularly testing their glucose levels, as the procedure is painful, inconvenient, and for many patients it has to be done many times every day. Poor control of glucose levels leads to a host of serious health issues in the long term, so ensuring that patients can test and adjust their glucose levels often is crucial for the health of this patient population.

This issue has inspired new forms of testing technology that are minimally invasive and avoid or reduce the number of required finger pricks. One such promising approach involves sweat testing. As sweat is released in small amounts near continuously under normal conditions and contains glucose concentrations that are reflective of blood glucose levels, it represents a

promising testing method.

Although glucose levels in sweat correlate loosely with blood glucose levels, there are significant levels of variability from person to person. The levels of glucose in sweat tend to be much lower than that in the blood, and rates of sweating can also affect the measurements.

Consequently, a 'one size fits all' approach to sweat glucose testing clearly isn't as accurate as it could be. To address this, these researchers have developed a device that can provide a personalized measurement for each patient. A user simply places their finger on the sensor for a period of 1 minute to collect enough sweat to test.

The sensor consists of a polyvinyl alcohol hydrogel which absorbs the sweat. The gel lies over an electrochemical sensor, which detects and measures the amount of glucose present through an enzymatic reaction that creates an electrical charge. Collected data are interpreted using an algorithm that corrects the reading for each user based on a monthly finger prick calibration.

So far, the device has been tested in a small number of volunteers and could accurately predict blood glucose levels before and after a meal with over 95% accuracy.

DoH activates remote healthcare platforms across public and private healthcare facilities

The Department of Health - Abu Dhabi (DoH) has activated its remote healthcare platforms across multiple public and private healthcare facilities in the emirate, with the purpose of serving patients abroad.

The platforms allow access to virtual medical consultations between the patient, their treating doctor in the emirate and a doctor abroad with international expertise.

This step aligns with DoH's commitment to continue all patients' treatment as per the highest quality standards upon their return to the UAE or upon resuming their medical journey abroad.

DoH explained that the platforms have been activated in Sheikh Khalifa Medical City, Tawam Hospital, Cleveland Clinic Abu Dhabi, Sheikh Shakhbout Medical City and Burjeel Hospital. They are made available in collaboration with the International Patient Care (IPC) Division and its stakeholders from overseas healthcare facilities.

DoH mentioned that the IPC Division, based on the decisions of the Medical Board Committee, will coordinate conducting the consultation sessions between the patient and both their local and international doctor, in addition to scheduling sessions between both doctors with the purpose of exchanging knowledge and expertise with regards to the patient's treatment, as well as discussing medial information about the patient before traveling abroad or upon their return back to the country.

The platforms will also allow examinations for patients before dispatch, to reduce the duration of their medical treatment journey and further enhance the patient experience. The patient is dispatched to the appropriate health facility according to their condition, examinations and medical

reports issued in the country.

All of this will contribute to further strengthening the patients' trust in the quality of services that they will receive by highly competent medical personnel in the country based on their medical treatment plan issued for them in the UAE.

Hind Al Zaabi, Acting Director of International Patients Care Centre at DoH, said, "The activation of IPC remote healthcare platforms reflects our commitment to continue providing world-class healthcare services to UAE international patients and ensure they receive the most suitable kind of healthcare. In these extraordinary times during the COVID-19 pandemic which imposed restrictions and challenges that made it difficult for patients to travel abroad for treatment, it was deemed necessary to create a platform that brought together treating doctors in the Emirate with international physicians and patients to discuss their medical plans and cooperate to best serve the patients."

"Despite the huge challenges the entire world has faced, Abu Dhabi has proved the excellency and efficiency of its healthcare ecosystem in dealing with the pandemic and succeeded in providing world-class healthcare services to all members of the community as it remains at the forefront of our priorities." Al Zaabi added.

The platforms enable medical personnel inside the country to exchange expertise their counterparts in international hospitals, enhance communications between them, and facilitate the exchange of scientific research.

DoH highlighted that the platforms conduct around 4 to 5 visual medical consultations weekly, in coordination with government and private healthcare sectors in the emirate.

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Aster Hospitals win UAE innovation award for 2020

We believe that innovation happens from the ground up, with our staff being the best innovators we can think of. We have monthly innovation meeting where people can put forward their ideas for processes and technology

Aster Hospitals UAE was announced as the winner of the highly prestigious UAE innovation award for 2020. Under the patronage of HH Sheikh Ahmed Bin Saeed AI Maktoum, Chairman and Chief Executive Dubai Quality Group, President of Dubai Civil Aviation Authority has provided this platform to private sector companies within UAE to showcase their innovative achievements.

Aster Hospital's patient centric approach and noteworthy contributions in providing better experience for patients, employees and clinicians, made this win possible for the organization. With the aim to deliver consistent quality healthcare services to its patients, the hospital has launched various digital technological transformations, innovative solutions and a positive culture of change in the organization. By winning this prestigious award, Aster Hospitals have raised the bar of digitally transformed practices in the

healthcare industry.

Some of the key initiatives are:

Implementation of a closed looped sample collection and medicine administration helped in mitigating potential errors.

IoMT (Internet of Medical Things) technology driven solution enables to ensure right patient in the right bed and this seamlessly circumvents identification errors.

Aster Hospital is one of the first healthcare provider in Middle East to host their business-critical applications over Microsoft Azure cloud and adding to that we implemented virtual desktop infrastructure, which is the future computing system.

To have a quicker response system in addressing large volumes of calls, Chatbot is implemented to respond frequently asked queries and online appointment bookings.

The hospital is also furnished with a dedicated innovation space called, 'TechLab'- A space solely dedicated for brainstorming sessions, conferences and training sessions. The space is setup for teams to come together to accelerate innovation, rethinking the customer experience, improving overall operational efficiency and testing new hospital business models with the help

of digital technologies. Additionally, Aster hospital also aims at implementing AI technologies in collaboration with Fuji to improve radiology services.

"The future of nursing excellence empirically depends on our ability to utilize/adapt technology, automations and digital transformation, busting the myth that nursing fraternity is not tech savvy and are accustomed to work in traditional norms. Nursing today is a prominent stakeholder in healthcare industry hence plays a pivotal role in promoting use of technology to contribute towards patient safety" said Ms. Sarah, Chief Nursing Officer, Aster Hospitals and Clinics, UAE.

Dr. Sherbaz Bichu, CEO of Aster Hospitals and Clinics, UAE, said "It's mainly about empowering our employees by fostering collaboration and innovation, "We believe that innovation happens from the ground up, with our staff being the best innovators we can think of. We have monthly innovation meeting where people can put forward their ideas for processes and technology." Dr. Bichu emphasizes that "the world is growing, but if you look at technology usage in healthcare, it is further behind compared to banking and other industries. In order to catch up we need to empower our employees by fostering collaboration and innovation, in addition to looking to other industries to learn and tailor solutions to the healthcare industry.

The UAE Innovation Award aims at recognizing and celebrating innovation excellence and the success of

Abu Dhabi will stop imposing quarantine requirements on international travelers starting July, according to media reports.

The move is expected to ease entry requirements for incoming visitors and boost the UAE's tourism industry.

The majority of travelers entering Abu Dhabi are currently required to undergo a quarantine upon arrival, unless they originate from a country that falls

organizations whose outstanding practices and achievements in innovation contribute to sustainable business growth.

The Award ceremony was conducted at Aster Hospital Al Qusais in presence of Ms Samira Shaloh, Managing Director, Dubai Quality Group, Dr. Sherbaz Bichu, CEO, Aster Hospitals And Clinics UAE, Ms Sarah Ilyas, CNO, Aster Hospitals and Clinics, Mr. Padam Sundar Kafle, Head IT and Automation, Aster Hospitals UAE, Mr. Joseph George, Regional Head IT, Aster Hospitals and Clinics GCC.

Quarantine free travel soon to be introduced for international travelers in Abu Dhabi

under the so-called 'green list'.

So far, only the incoming passengers from at least 23 countries can enter the UAE capital without quarantine. The countries include Australia, Bhutan, China, Hong Kong, Israel, Japan, New Zealand, Saudi Arabia, Russia, Singapore, South Korea and Morocco, among others.

At the Arabian Travel Market (ATM) on Sunday, Ali Al Shaiba, executive director of Tourism and Marketing Abu Dhabi, more countries will be added to the green list this week.

"This green list will cover a majority of the markets that we are tapping into," Al Shaiba was quoted by Gulf News as saying.

"Abu Dhabi will be open for everyone with no quarantine protocol starting from July. We are going to welcome everybody to Abu Dhabi with a different protocol but no quarantine," Al Shaiba said.

MoHAP ramps up global efforts to increase Hypertension awareness

The Ministry of Health and Prevention (MoHAP) has said that the World Hypertension Day, observed on 17th May every year, is an important occasion to ramp up global efforts to increase high blood pressure awareness around the world regarding its symptoms and the importance of prevention and early detection to curb the complications and hazards of high blood pressure, which often referred to as 'the silent killer'.

Celebrating the World Hypertension Day under the theme "Measure Your Blood Pressure Accurately, Control It, Live Longer", MoHAP said that the UAE is considered a world leader in providing outstanding health services to high blood pressure (hypertension) patients, by shifting focus from treatment to prevention and listing the blood pressure disease in the health indicators of the National Agenda 2021 and the National Strategy for Combating Non-Communicable Diseases.

As part of its plan, implemented over the past three years, to provide world-class and scientific evidence-based healthcare services, MoHAP has opened non-communicable disease clinics to help hypertension patients know and control their disease, resulting in raising the blood pressure control rate to 78 percent.

In 2019, MoHAP has launched the 4th updated version of the Hypertension Guideline to build the capacity of healthcare providers and deliver the best preventive and therapeutic services for patients with hypertension. The guideline includes health tips for patients to maintain a healthy lifestyle, exercise

A British medical technology company behind an innovative diabetes monitoring system has identified Saudi Arabia as one of its key target markets.

Nemaura Medical has developed a wearables device which can help diabetics track their blood glucose levels, and the Kingdom is high on the firm's international expansion plans list.

Its sugarBEAT continuous glucose monitoring (CGM) product was recently launched in the UK and is targeted at people suffering from conditions such as diabetes who want a needle-free alternative.

Initially the company recorded orders of 200,000 sugarBEAT sensors in the UK and has forecast total sales of 2.1 million this year.

Following positive feedback in the UK, it has announced plans to expand internationally and is lining up product launches in Germany, the UAE, and Saudi Arabia.

regularly, eat a healthy diet, reduce salt intake, and quit smoking.

According to MoHAP's National Health Survey 2017-2018, the high blood pressure rate was 28,8 percent. In the meantime, the Ministry, in partnership with the concerned parties, has developed a national plan to reduce this rate to 21.8 percent by 2025, by intensifying outreach campaigns, encouraging community members to conduct regular screening, and working with competent authorities to enact legislation to reduce the consumption of salt and saturated fat.

In 2018 and 2019, MoHAP, together with its strategic partners and the Heart Association, launched a blood pressure early screening drive as part of a global campaign, during which 32,500 adults, among them 20 percent with high blood pressure disease, were examined, which led the UAE to come first globally in blood pressure screening for adults and 9th globally for all age groups.

KSA identified as key target market for diabetes monitoring system by British medical technology company

Dr. Faz Chowdhury, the chief executive officer of Nemaura Medical, said, "We believe our technology is ground-breaking and represents a paradigm shift in the way people with diabetes can manage their condition.

"We believe we have a critical first-mover advantage with a product that is easier to use, more flexible, and more costeffective than existing technologies. We are not aware of any product of a similar nature in clinical studies or that has been submitted for regulatory approval." Nemaura Medical was founded in 2011 and recently expanded into the wearables market to develop and commercialize devices which can help to monitor chronic diseases and health conditions without the need for needles.

The CGM market is a growing sector and according to the Allied Market Research company will be worth around \$9 billion by 2027.

The potential market for devices such as sugerBEAT in the Middle East and North Africa (MENA) region is considered strong with data from the International Diabetes Federation (IDF) showing more than 39 million 20 to 79-year-olds in the region having the condition in 2019. The figure is expected to increase to 108 million by 2045.

The IDF has estimated that in Saudi Arabia 15 percent of the adult population has diabetes.

PRODUCT LAUNCH

Max Bupa launches 'Senior First'

Max Bupa recently announced the launch of 'Senior First' – a tailor-made plan for senior citizens. The plan is designed to provide support and care to seniors in their golden years. Senior First plan includes coverage options of up to Rs 25 lakh with no sub-limits on common health conditions like cataract, knee replacement, etc.

To help customers overcome the current challenges faced while purchasing health insurance for senior citizens and to provide them ease of policy issuance, the Senior First plan comes with several attractive features, including no mandatory pre-issuance medical tests, health check-ups from day 1, hassle-free claims process and more.

Some of the key benefits of the plan include, reassure benefits, safeguard add on, no sub-limits applicable on common conditions, no mandatory pre-medical tests, choosing own co-payment, swap co-payments for deductibles, no claim bonus, health check-ups from day

one, coverage for domiciliary treatment, and daycare treatments.

The ReAssure benefit is triggered with the first claim itself and is an unlimited sum insured benefit. Anyone claim paid from this benefit can be up to the base sum insured. One can make as many claims as required in the same policy year, for the same or different illnesses.

In a nutshell, this feature will enable senior citizens to never fall short of coverage which is critical to protect against unforeseen medical expenditure towards all kinds of diseases, including Covid-19. Even in case of critical illnesses like kidney failure, dialysis or cancer, when patients often need hospitalization multiple times in the same year. Unlimited coverage of the product will prove to be extremely useful.

Krishnan Ramachandran, MD and CEO, Max Bupa Health Insurance, says, "The product has been designed to address the current gaps in providing quality healthcare services to senior citizens. Currently, senior citizens face several challenges while purchasing health insurance. This includes undue hassles of going through mandatory medical tests, policy denial due to chronic pre-existing conditions, high premium, inadequate coverage, high co-pay options, amongst others."

He further adds, Senior First plan has been carefully designed keeping in view the financial security needed for seniors amidst growing medical inflation. We realize that people want to be financially secured in these difficult times, hence a truly cashless product will ensure there is no financial burden on them once they opt for this policy."

Senior First is a cashless product and with safeguard benefits offering 100 per cent coverage for otherwise non-payable expenses such as PPE Kit, Gloves, Oxygen masks, Conveyance charges and more. The product also covers expenses incurred during all-day Care Treatments, requiring more than 2 hours of hospitalization, including angiography, dialysis, and radiotherapy. Senior First plan also includes No Claim Bonus benefit to reward customers for staying healthy. Additionally, policy buyers can also choose their own copayment as per their financial health and can swap co-payments for the deductible.

Lane Health Inc., recently announced that it is launching an innovative Health Savings Account (HSA). Offered through participating employers, the Lane HSA includes an Advance feature that works like a line of credit through the HSA that employees can use to pay for qualified medical expenditures. The Lane Health 'Card with a Heart' provides inclusive, on-demand, swipe-and-go access to the Advance feature with no credit checks. The Card with a Heart makes high deductible health plans less scary, allowing them to work for everyone — not just the few who can afford to contribute to, and save money in, an HSA. The Advance is issued and funded by WebBank, through Lane Health, with no risk to the employer. Advances are repaid through pretax HSA contributions over a twelve-month period, regardless of when the Advance is initiated during the calendar year. And employers save as well, since they incur no payroll taxes on dollars that employees contribute to an HSA.

"The increasing cost of healthcare and healthcare insurance continues to drive the need for innovative credit and payment plans"

Based on WebBank's strong commitment to support financial innovation in the patient healthcare sector, the Bank is excited to issue and fund the Advance and also to invest in the Lane Health platform.

"We were fortunate to have a number of partners willing to provide

Lana Health's innovative Health Savings Account

debt and equity funding to the Lane platform. WebBank immediately grasped the significance of our value proposition for the consumer: medical cost savings, improved quality of care and peace of mind. They offered a compelling package of committed capital to support our mission," said Brad Gambill, Lane's Co-Founder and CEO. "More importantly, the WebBank team provided advice and expertise, gleaned from the bank's many years as an originator and lender through its portfolio of leading FinTech partners. WebBank has been an invaluable partner in helping us to develop the policies and processes that must be in place to offer this exciting product."

"The increasing cost of healthcare and healthcare insurance continues to drive the need for innovative credit and payment plans," said Jason Lloyd, President of WebBank, "and we are excited about the launch of this next generation credit product that is fully integrated with the Lane Health Savings Account product."

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UPCOMING EVENTS

MEDIWORLD

Sharjah Airport

YOUR PHARMA IS IN SAFE HANDS

Sharjah Airport is the first to offer IATA CEIV Pharma certified cargo handling services in the Middle East and Africa, via its sole ground handling agent Sharjah Aviation Services.

Dedicated Temperature Controlled Storage

 1500 m³ capacity of 2-8°C and 15-25°C temperature controlled and monitored storage

Active Cooling Equipment

• Owned and managed rollerbed reefer trucks 4x Q7 Positions (or equivalent) with Real Time Temperature Monitoring & GPS tracking.

Cooling range -18°C to +25°C

- 10Ft (or 2 LD3) ULD dollies. Cooling range -18°C/ +25°C
- Bulk trailers 2500Kg / 14m³ capacity.

Cooling range 0°C/ +18°C

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THE WORLD'S HEALTH IS IN THE SAFE HANDS OF TURKISH CARGO

AS THE CARGO AIRLINE THAT FLIES TO MORE COUNTRIES THAN ANY OTHER, WE CARRY ALL YOUR HEALTH AND WELLNESS NEEDS, FROM PHARMACEUTICALS TO MEDICAL SUPPLIES WITHOUT EVER INTERRUPTING THE TEMPERATURE-CONTROLLED COLD CHAIN.

