

# THIRTY TO NET ZERO



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## EXCLUSIVE INTERVIEWS

Ahmed Elbanna: CEO, Saudi German Health

Latessh Jain Sen: Founder & CEO, Arterial Health Grids

Tasneem Mahmoud: Healthcare Technology Management Consultant

### SPECIAL REPORT: SUSTAINABILITY IN HEALTHCARE

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## Editor's Note

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Dear reader,

Healthcare in the Middle East is a challenging industry, changing faster than ever before. There are new specialities, new opportunities and the need for new skills every day. 'Working in healthcare' means something very different than it did a decade ago.

Last month, we got together with a small group of experienced healthcare professionals from different walks of life - Ahmed Elbanna of Saudi German Hospital, the Latessh Jain Sen of Arterial Health Grids and Tasneem Mahmoud, healthcare technology management consultant in Saudi Arabia to discuss these changes.

We explored healthcare from a sustainable and net zero point of view in today's environment.

And they told us everything in the best regional scenarios.

We have designed this issue with everything in these exclusive and insightful interviews. The stories are succinct and impactful.

If there are other topics you would like to see us cover send me an email at [editor@secretariatsworld.com](mailto:editor@secretariatsworld.com).

*Pallavi Shevade*

Pallavi Shevade  
Publisher  
Thirty To Net Zero Magazine  
Secretariat's World Groupe

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# MENA REGION WILL WITNESS HUGE DIGITAL TRANSFORMATION IN HEALTHCARE SECTOR: AHMED ELBANNA

Over the past few decades, the health systems and health outcomes of the people living in MENA countries have seen substantial improvements. Among these were advancements in both schooling and society at large, such as the introduction of new medical technologies and the expansion of existing public health initiatives. Improvements in these nations' ability to provide their citizens with access to primary healthcare have been dramatic. A variety of indicators of health, such as the average life span at birth, have seen marked improvements as a result of these reforms (LEB). The health of mothers and children, as well as the control of communicable diseases, have made great strides forward in MENA nations. In fact, these nations have reduced infant mortality at a faster rate than any others in the world's developing world. However, there are substantial differences in these successes both between and within MENA nations.

In the next three to five years, we will see a complete digital transformation of the healthcare industry, with implications for everything from medical equipment to customer service to telemedicine to the myriad mobility applications that will allow patients to receive care more quickly and more conveniently, no matter where they are or what time of day it is. Thus, this fits in with our mission to provide cutting-edge medical treatment whenever and wherever it is needed. This is, therefore, what we accept as true.

## **Green healthcare will penetrate deeper into the region**

From a changing population and rising expectations to the rise of chronic and lifestyle-related diseases, healthcare in the GCC area faces many obstacles. Healthcare spending in the GCC region will need to rise by 400% from current levels, according to a prominent international accounting firm. Recognizing these obstacles only strengthens the case for GCC governments to pursue more creative and sustainable methods of providing healthcare.

With help from other countries, the kingdom of Saudi Arabia (KSA) has built a world-class healthcare infrastructure that can meet the needs of its 9.3 million citizens indefinitely. "His Majesty" Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, introduced a seven-year UAE National Agenda, that aimed to address six national objectives, two of which being 'world class healthcare' and 'sustainable environment and infrastructure'.





The country takes a novel approach by addressing both of these issues at once through initiatives like the Green Economy Project, a wide-ranging strategy that promotes the use of green building materials in healthcare infrastructure, and the Smart City Project, which offers logistical solutions like healthcare apps and mobile clinics.

In the healthcare industry, an annual reporting, measurement tool is an important box to check before the end of the fiscal year and before findings are delivered to the local authorities. You must disclose the extent to which your company has implemented environmental and societal policies and procedures.

Stretching further on this development, Ahmed Elbanna, CEO, Saudi German Hospital Jeddah stated, "As a result, the healthcare industry and excellent health, environmental, and social governance are centre stage. We have the biggest footprint of any healthcare organisation in the Middle East, with 13 hospitals and our own construction firm. We are required to submit an application for the Leeds management certificate in our buildings whenever we plan to create or construct a new facility."

"We are considering how this structure can benefit the local population and its customers by providing first-rate amenities with minimal negative effects on the environment. As a result, we typically install solar panels on our roofs for the sole purpose of providing emergency power. Additionally, the service infrastructure is guaranteeing at least 40% of the emergency power. Patients undergoing dialysis treatment are another illustration of our work. All the waste products of these devices are collected and recycled for use in the agricultural system. This is beneficial to the plants in and around the booth and outside the stadium. The water and the sun are the two main elements that we use. We typically construct these ourselves," he added further.

Further adding on benefits of adopting sustainability, he said, “We have sensors installed throughout the building to reduce our energy usage, which has helped us save significantly on our monthly electricity costs. After implementing this, we saw a 30% decrease in our annual energy bill for a single building, which boosted the building's financial performance. Thus, whenever a new building is constructed, this becomes a very large and space-consuming addition to the rooftop, releasing a great deal of heat and smog into the neighbourhood while also increasing the demand for chilled water and the corresponding expansion of water pipes. This means that you can get it whenever you like. And that means matching up with business hours. When not in use, some machines have been put into sleep state. As a result, we have been able to more accurately portray our company's societal responsibility to the public.”

### **Painting green by managing plastic waste**

Safe medical waste handling has been recognised as an issue of global importance. All healthcare facilities, from clinics and doctors' offices to blood banks and mortuaries. Infectious waste (also known as hazardous medical waste) accounts for 15–25% of all healthcare garbage and poses the greatest threat to human health. Blood and blood products, used catheters and gloves, cultures and stocks of infectious agents, wound dressings, nappies, discarded diagnostic samples, contaminated materials (swabs, bandages, and gauze), disposal medical devices, contaminated laboratory animals, etc. may all fall under the category of infectious wastes.

Talking about managing this waste in more eco-friendly way, Elbanna said, “Something similar to managing waste in eco-friendly way is included in our yearly monitoring report every year as required reporting to a government agency. A key element is our system for managing and regulating rubbish. Consequently, we have adopted a system whereby our crush bins are separated into three distinct compartments. One for non-recyclable plastics, one for recyclables, and one for glass and retail packaging. Also, as a hospital, we need this for our hazardous refuse. Therefore, we must segregate our garbage by colour, placing biohazardous refuse in red bags, infectious materials in yellow bags, contaminated garbage in green bags, and so on. This results in a total of five distinct colour schemes for trash. The government has approved a company to serve as a supplier replacement, collecting and processing recyclables. This means that there is a specialised firm whose sole purpose is to gather and process such items.”

“The hospital environment is very advanced and complicated, and so is the question of how to control waste. Business, for example, includes everything you could need in one place, including food and labour administration as well as medication and supply management. This raises the question of how to modify existing policies and processes to meet the requirements of various hospital accreditations, given that they all have their own unique set of rules to follow. You'll find specific instructions for dealing with things like discarded medications in their respective chapters. Therefore, there is a policy that stipulates all medications must be returned from all sub areas, clinics, inpatient rooms, and sub stores at least six to three months before their expiration dates. The main store will then need to communicate with the supplier, who will then come in and take the medications and manage the waste,” he opined further.



## **Obstacles cutting the road to success**

Certain conditions must be met before a proposed remedy will be adopted and used. Foremost is dependability. Second, how can you make sure that these options are safe for the healthcare sector, third, perhaps the availability and technology. As such, whenever the time comes to consider what sort of push should be made, etc., these are the factors that typically spring to mind. Players of healthcare face many obstacles, such as figuring out how to provide a better environment for their patients.. In order to work in a safer, more pleasant setting with access to better amenities, you can choose from a wide variety of credentials available today.

Another important factor is providing cutting-edge medical treatment to patients, which necessitates having the most recent equipment. Because modern technology undergoes radical shifts every three years, this presents a significant obstacle. Rather than the seven to ten years it took in the past, today's tools and new technology see an upgrade every two to three years. So how do one maintains the momentum to provide them with world-class medical services and patient treatment by using state-of-the-art systems, biomedical equipment, and healthy, safe food? This is all part of the second test.

The third difficulty is the expense of running the business. The current high rate of inflation and the excessive use of energy pose serious challenges to the day-to-day operations of any business.

As a publicly traded business, the expectations of our investors and other stakeholders are high, so we have to make sure that we deliver.

"We regularly consider ways to lessen the impact of energy and general and administrative costs on our bottom line. Since our complex is in operation around the clock, every day of the year, we face a unique set of difficulties that may not be encountered in other industries. How to be prepared for a pandemic or disease is the final topic. Like the COVID-19 virus that caused widespread economic damage. Our fourth obstacle is how to improve accessibility in advance of a catastrophe. This is one of the most difficult tasks we face. These are the four tests, then. Finally, we have a supplier engagement procedure to help us better serve our clients. How can we improve our effectiveness for our vendors? In the present day, we have established something termed and the IT systems. vendor supply management describes this process. Thus, previously, only our employees saw our warehouse management. Now, in order to improve supply chain management, we have set up our IT infrastructure so that suppliers can view the inventory of only the goods they supply. So, they'll know ahead of time how to replace stocks automatically without having to call them and get them in order to meet the minimum stock level. That's why it's so difficult to maintain what are known as "just in time" supplies: they must be delivered exactly when they're needed. So, this is a common problem in the hospital system," said Elbanna.

## AI is the current pulse of the region

The use of AI is becoming increasingly popular, and many experts predict that it will replace many human occupations within the next decade. In the realm of imaging, the most cutting-edge technology and artificial intelligence have enabled machines to learn from data in order to improve accuracy. So, this is the form the reward should take; after a short review or audit, the data could be made public with minimal effort. Because of this, it is imperative that the machine understand what the imaging findings are based on the inputs and corrections provided by the artificial intelligence.

“Right now, robotic spinal surgery is a reality for us. As a result, knee replacements and some some arthroplasty procedures are now being performed by robots, an immensely beneficial development. Patients are experiencing less discomfort, recovering faster, and spending fewer days in the hospital as a result, all of which contributes to a reduction in overall healthcare costs,” said Elbanna.



Ahmed Elbana at SGH-Hai Al Jama (Soft Opening) – New Branch Under SGH Jeddah





Ahmed Elbana at SGH-Hai Al Jama (Soft Opening) – New Branch Under SGH Jeddah

“In the future, artificial intelligence will replicate many occupations, which will have real consequences for humans. As in other fields, this is the future of education. We are almost completely automating processes now due to a lack of a modelling laboratory. If you're a doctor and you don't have access to a hospital or a job yet, you won't be able to conduct conventional lab tests. In order to get the most out of your training, visit a simulation centre where every mannequin and training tool is hooked up to a computer, camera, and dashboard. Every action you take in this lab—which is really just a replica of a hospital—will make you feel as though you're truly in a real hospital,” he commented further.

Because AI can read and report to a decision support system when one writes, for example, two different medications for the same patient, it will also aid in accurate diagnosis, which is important for the patient's well-being. The device will alert you if an allergy is detected. DSS stands for "decision support system" and is a relatively new concept. In cases where there is a discrepancy or error, the algorithm will alert you to the fact that you should exercise caution. As a result, doctors are less likely to prescribe the incorrect drugs or implement ineffective treatment plans before reading up on the topic further (via Google, books, etc.). It has been integrated into the system at this point. The potential for harm to the sufferer is thus removed.

In his free time, Ahmed likes to read books and in his organization, he has developed unique system which allows the people of the organization to assess a particular book. “We pick up a book to read and discuss as a large Whatsapp group. In other words, everybody is going to be here today. Meanwhile, one of us gives a summary of the text for the rest of us to listen to. It usually takes about half an hour, and then we have 15 minutes of open conversation about the useful lessons we've learned from the book. As a result, you gain valuable insight into the minds of your coworkers and the range of ideas they bring to the table,” said Elbanna. Apart from this, he likes to indulge in sports which is one of the major past time activity.

All Photos Are Provided By Ahmed Elbanna From SGH Group

# FRAMEWORK FOR SUSTAINABLE HEALTHCARE DESIGN

As the Middle East becomes the global leader in combating climate change over the next two years, it is imperative that the region's healthcare companies work toward establishing a resilient ecosystem to drive change.

The United Arab Emirates will host COP28 in 2023, following this year's COP27 in Egypt, which calls for companies to demonstrate their commitment to environmental and sustainability issues through more than just words. Some may be surprised to learn that the whole healthcare industry—from doctors' offices to drug factories—is responsible for about 4% of global greenhouse gas emissions.

According to AstraZeneca's area Vice President for the Middle East and Africa, Pelin Incesu, the healthcare industry would be the world's fifth-largest emitter if it were a country. This claim was made in a recent piece published in regional media.

The healthcare industry "must recognise its contributions and play a key role in driving down emissions," she said, if the world is to achieve the internationally agreed targets to limit global temperature increases.

She added that AstraZeneca is spending \$1 billion on its Ambition Zero Carbon programme to reduce its carbon footprint and make the company more resistant to disruptions in its supply chains. According to her, AstraZeneca's climate strategy is in line with the most recent scientific findings because the company is in the biotechnology industry.

Climate change is affecting humanity and leading us to a precipice through global warming," Dr. Azad Moopen, Founder Chairman and Managing Director of Aster DM Healthcare, said. The general public, especially the youth, is growing increasingly environmentally conscious and activist. However, major corporations, including healthcare providers, must take the initiative in this because it is their responsibility to the next generation.

## **Abu Dhabi's world-class healthcare ecosystem**

The government of Abu Dhabi's response to the current health crisis has been successful without jeopardising its long-term objectives. The Abu Dhabi Economic Vision 2030 serves as the foundation for its principles and plans to strengthen the healthcare sector by increasing capacity and provision. The vision calls for a 21st-century health system that prioritises patients, for healthcare professionals to improve their practise, and for the sector as a whole to embrace innovative technologies for disease prevention and treatment.

Healthcare companies of all sizes that are looking to break into the booming MENA region will find the vision appealing.



There is a robust pipeline of public and private sector investment, particularly in specialised care, and public private partnerships with world-famous medical providers, which is being driven by the construction of new hospitals, clinics, and specialised facilities (Global Data's healthcare projects database reports here are nearly 350 hospital projects currently underway across the entire region).

All the pieces—including the right tools, networks, culture, regulations, talent, and infrastructure—are in place for businesses to grow, tap into their full market potential, and contribute to the solution of some of the world's most pressing problems. In addition, we are still in the midst of a metamorphosis.

Technology boosts Abu Dhabi's economy by \$182bn

KPMG's Who Cares Wins study states that the health organisations in the UAE are fostering innovation by encouraging the use of emerging technology. Accelerated adoption of AI is projected to boost the country's economy by \$182 billion by 2035.

Some private healthcare providers across the country now offer telehealth services, and this year also saw the introduction of other digital health solutions such as remote consultations.

To better health outcomes and expand access to care, the Department of Health's AI Lab is conducting a number of AI-driven telemedicine projects.

Increased Public Private Partnership (PPP) opportunities in Gulf Cooperation Council countries are expected to fuel ongoing smart hospital projects and digital health initiatives like artificial intelligence (AI), blockchain, and robotics, per the findings of Frost & Sullivan's Global Healthcare Market Outlook 2019 report.

Launched recently, Malaffi is the Middle East's first Health Information Exchange and an integral part of Abu Dhabi's efforts to digitise its healthcare system. Clinicians in Abu Dhabi will now have secure access to the 33 million encounters, procedures, problems, and allergy records for patients over the past five years, thanks to the network connecting all public and private healthcare providers in the city. This public-private partnership (between Abu Dhabi Health Data Services and Orion Health, a New Zealand provider of healthcare IT) is a model of its kind, having produced visible benefits very quickly.



## **The United Arab Emirates' healthcare budget is expected to grow to \$21.3 billion in 2018**

The government of the United Arab Emirates (UAE) is working to create a healthcare system that is among the best in the world. Business Monitor International predicts that healthcare spending would rise to 4.6% of GDP by 2026, from 4.2% in 2016.

Alpen Capital predicts that by 2022, the number of beds needed in the country will increase to 14,969, an increase of 2,069 beds from current levels. The 700 healthcare projects totaling \$60.9 billion that are now in development will be able to meet this demand.

Burjeel Medical City, located within Mohammed Bin Zayed City, will be the largest private medical healthcare facility in Abu Dhabi, with 400 beds.

## **The Future of Healthcare: Towards a Sustainable Transformation**

The GCC region, like other parts of the world, is dealing with a variety of healthcare issues, such as a changing population and rising expectations, as well as the increasing prevalence of chronic and lifestyle-related diseases. Healthcare spending in the GCC region will need to climb by 400% from current levels, according to a top international accounting company. The governments of the GCC are already making strides toward a more sustainable and innovative approach to healthcare delivery, and acknowledging these challenges will only help.

With help from elsewhere, the United Arab Emirates (UAE) has created a cutting-edge, long-term healthcare system that can adequately serve its population of 9.3 million. To Whom It May Concern, His Majesty The Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai, Sheikh Mohammed bin Rashid Al Maktoum, recently unveiled a seven-year UAE National Agenda that aims to address six national priorities, including "world-class healthcare" and "sustainable environment and infrastructure." The country takes a novel approach by addressing both of these issues at once through initiatives like the Green Economy Project, a wide-ranging strategy that promotes the use of green building materials in healthcare infrastructure, and the Smart City Project, which offers logistical solutions like healthcare apps and mobile clinics.

With only 2.8% of GDP going on healthcare, Oman's forward-thinking approach to sustainable transformation has increased the number of hospitals from 2 to 60 and the number of doctors from 13 to over 5000 in just 50 years. Several national and local level policies are being implemented as a result of this massive increase in resources, all with the goal of moving toward a more sustainable preventative healthcare model.

Over two hundred public schools, for instance, have been designated as "health promotion centres" thanks to a school health plan, which means they have received the funding and support they need to educate their students and families on the value of healthy eating and regular exercise.

Over four thousand male and female volunteers drove a nationwide community-based movement that sparked the formation of "healthy city and village" programmes that act as a bridge between hospitals and their surrounding neighbourhoods. The result of such approaches has been to shift the burden of care for one's health onto the individual, thereby releasing resources for other uses.

The UAE and Oman's progressive healthcare systems are indicative of their governments' commitment to proactively address current and future difficulties related to sustainable healthcare transformation. They set an aspirational but achievable standard for other nations to follow in light of the persistent problems with the world's population's health.



AstraZeneca's area Vice President for the Middle East and Africa, Pelin Incesu // LinkedIn



# HEALTHCARE IS NOW JUST A CLICK AWAY!

Customers in the Middle East are rapidly embracing digital services. At an estimated 93%, smartphone penetration rates in the Kingdom of Saudi Arabia (KSA) and the United Arab Emirates (UAE) are among the highest in the world.

It would appear that Saudi Arabia and the United Arab Emirates are ideally situated to gain from digital-healthcare technologies. McKinsey surveyed 1,400 customers in KSA and UAE in 2022 to learn more about their attitudes and experiences with digital-health services. The poll results showed that there is widespread curiosity about and familiarity with these kinds of technologies. The research suggests that the Kingdom of Saudi Arabia and the United Arab Emirates may implement digital-health technologies to better serve their patients in the areas of chronic-disease management, diagnostics, and preventative treatment. With effective leadership, the Saudi Arabian and United Arab Emiratesan digital health markets might reach \$4 billion by 2026.

## **The healthcare sector in the UAE is poised to benefit greatly from the spread of digital innovation**

Experts at the second Middle East Digital Health Forum stressed the importance of adopting a sustainable approach that fully exploits the potential of new technology in a world where sectors are continually being disrupted.

Khaleej Times hosted the event in Dubai, under the flagship of the Ministry of Health & Prevention ; Hewlett Packard Enterprise was the Gold Sponsor, and KeyReply was the Networking Sponsor.

Assistant undersecretary of Support Services at the UAE Ministry of Health and Prevention Ahmad AlDashti said in his opening keynote that the event would help the country's ongoing efforts to improve healthcare quality and would give service providers a chance to talk about how they could use the latest smart digital technologies to increase the UAE's competitiveness in the healthcare industry.

Without the country's proactive vision, which fuels the flames of innovation and excellence, "we are very pleased of the UAE's transition as a worldwide gateway to the future," he said. The government has spent a lot of money over the years on digital health projects so that people can benefit from cutting-edge technologies and cutting-edge uses of existing digital infrastructure. Simply said, we aspire to make the United Arab Emirates (UAE) one of the most progressive nations in the world by establishing a first-rate healthcare system.



As pointed out by Morad Qutqut, chief customer innovation Officer at Hewlett Packard Enterprise (HPE), digital innovation executives are constantly considering new ideas and how they might be implemented to better serve their clients. He mentioned the difficulty of sharing medical records as a major barrier. It's been said that "the more data we have, the more visibility we'll have, and this leads to better predictions."

He also spoke highly of HPE's Digital Life Garage, an initiative that brings together government agencies, academic institutions, and tech firms to foster a more cooperative approach to advancing technology worldwide. We've helped a variety of international research projects by providing access to high-powered computers and cutting-edge tools.

The CEO of Danat Al Emarat Hospital, Dr. Mohaymen Abdelghany, recently discussed how "societal satisfaction" is now required from healthcare professionals. Part of the reason for this is the influx of tech firms into the healthcare industry. When it comes to wearables and digital health services, "Google, Amazon, and Apple are all powerful new entrants," as one analyst put it.

He went on to say that the process of changing is ongoing. "When it comes to digital transformation, organisations should follow a 'step-assess-step-assess' strategy."

Dr. Younis Kazim, CEO of the Dubai Healthcare Corporation, Dubai Health Authority, cited the Dubai Paperless Strategy as an example of a successful case study that was executed in Dubai and how it had been crucial in the digitization of patient information. "It is in accordance with the emirates' mission to provide the best quality of patient-centric care to go paperless and use health data to enhance our public health policy."

According to Dr. Haidar Saeed Al Yousuf, MD of Al-Futtaim Health, providers who adopt new technologies early on will have a competitive advantage. Technology, he argued, should not be used only for the sake of technology. We have barely scratched the surface of what can be accomplished with technology at present. For the sake of long-term patient care, we need to use a lot more cutting-edge technology.





## **The healthcare industry must prioritise digital solutions**

According to KeyReply CEO Peiru Teo, a solid digital strategy is becoming a prerequisite for success. "Healthcare organisations that do this will be a lot more flexible to adapt changes and have a faster return on investment on new programmes," she told Khaleej Times. "They can raise income by staying at the forefront of patients' minds and reduce expenses through greater efficiency over time."

Teo emphasised that the end users, the consumers, stand to gain the most from these developments, as they stand to receive improved quality of care and service while also having the opportunity to better control costs as a result of providers' efforts to streamline their operations and increase efficiency.

She also noted that many current inefficiencies have evolved through time and serve a useful purpose. When systems don't communicate with one another, it might lead to redundant human labour like checking and entering data by hand. These contribute to longer wait times and more frequent mistakes. Existing procedures and staff education may be to blame as well.

"Organizations can make the most of available opportunities to use novel and long-lasting forms of technology to introduce innovations entailing process redesign and to connect systems in such a way that data can flow in a closed loop within the ecosystem for optimum interoperability. The integration expenses will be greatly reduced, and the data gathered longitudinally across time will be far more informative and complete, she said.

Taking a digital-first approach to healthcare today saves time, enables the collecting of precise and historical data on patients, and will ultimately prevent diseases and lengthen human life, according to Jacques Najjar, general manager of MDS Computers, a division of Midis Group.

Human error is reduced, clinical outcomes are enhanced, care coordination is simplified, practise efficiency are increased, and data can be tracked over time, just to name a few of the many ways in which it has the potential to revolutionise healthcare. "Patients will be able to make educated choices about their health," Najjar said.

He predicted that the digital transformation of the health care industry would have far-reaching effects, including improved access, higher quality, and lower costs. It's easy for patients to get in touch with their doctor of choice.

## **Emerging importance of AI in Middle East Region**

Future health care services will benefit greatly from the incorporation of artificial intelligence (AI). It's the driving force behind developments in precision medicine, which are widely hailed as a much-needed medical innovation. Furthermore, it is crucial in imaging, diagnosis, and clinical decision-making. After artificial intelligence is introduced into the healthcare system, significant productivity benefits are anticipated. Saudi Arabia and the United Arab Emirates have taken the lead in this area in the Middle East. Okadoc, a regional healthcare startup, has raised \$10 million, one of the largest sums in the MENA region, and plans to utilise the money to establish telemedicine, allowing doctors to do virtual consultations.



The CEO of Danat Al Emarat Hospital, Dr. Mohaymen Abdelghany // LinkedIn

As the Gulf Cooperation Council countries look to broaden their economies, the healthcare services sector will emerge as a promising opportunity. In 2017, the United Arab Emirates (UAE) unveiled its first AI plan to lessen the prevalence of chronic diseases like diabetes and heart disease. The government has established a ministry dedicated to technology in order to coordinate the country's efforts to become the artificial intelligence (AI) capital of the world. The Dubai Health Authority (DHA) has initiated the smart home care project to ensure that patients can be monitored easily and safely without having to travel to the health facility for treatment or procedure, and that artificial intelligence (AI) can be used to evaluate the data and gain deeper insights.

A new area of development in the digital health ecosystem is remote patient consultation and diagnosis. Patient records and other healthcare data are created and stored using artificial intelligence (AI), big data (DB), the internet of medical things (IoMT), blockchain, augmented reality (AR), virtual reality (VR), and three-dimensional (3D) diagnostics. In this age of soaring healthcare expenses, precision diagnostics is more important than ever before since it allows for more individualised care, especially for patients undergoing long-term therapy. Thus, patients are more likely to have access to a higher quality medical care, which in turn improves their health and overall standard of living. Most diagnostic health technology companies have recently zeroed in on radiology solutions, with pioneers creating new algorithms that employ deep learning to analyse medical photographs and so effectively diagnose conditions like breast cancer and tuberculosis. The time spent waiting for a diagnosis has been cut down considerably thanks to the instantaneous transfer of medical imaging via digital health.



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# KEY STRATEGIES ON SUSTAINABLE DIGITAL HEALTHCARE TRANSFORMATION

The pandemic of COVID-19 has shed light on the triumphs and failures of the global healthcare system in ways we have never seen before in our lifetimes. Healthcare facilities all around the world have been pushed to their breaking points by the influx of millions of patients. It has accelerated the shift toward digital healthcare by forcing hospitals to rethink their practises and implement new tools for managing staffing on a massive scale, keeping tabs on infections in real time, and providing remote care to patients who are quarantined.

According to Global Market Insights, the digital health business would be worth \$504.4 billion by the year 2025. Included in this umbrella term include genomics, artificial intelligence (AI), and Big Data, as well as mobile health, e-health, and telemedicine.

The public's reaction to COVID-19 has relied heavily on digital health technologies, although their uses go far beyond the epidemic. When considering the prevalence of rising global macro trends like ageing populations and the growth of non-communicable diseases (NCDs), including diabetes and cancer, it is clear that digital health and medical technologies will play a crucial role in relieving the strain on and improving the capability of the world's health workforce.

## **An increase in chronic diseases that don't spread**

Rising rates of poor eating and inactivity are major risk factors for the development of non-communicable diseases (NCDs) in the Middle East. In 2019, the Gulf area had one of the world's highest diabetes prevalence rates, as reported by the International Diabetes Federation. Keeping tabs on illness patterns and keeping tabs on chronic patients' treatment adherence and progress toward recovery is critical in the midst of this pandemic.

As the region tries to slow the spread of NCDs, it is turning to cutting-edge technologies like artificial intelligence, wearables, blockchain, and the Internet of Things. Using the capabilities of these technologies to identify disease early and monitor patients remotely can yield major benefits for nations with a high incidence of NCDs.

Business analysts at Frost and Sullivan predict rapid expansion in the regional wearables market in the next years as more people realise the value of using AI to monitor their noncommunicable diseases. In order to effectively manage patients and gain insights into population health, biosensors can be placed in wearable devices that continuously monitor their condition.



Jebin George, programme manager, industry solutions at IDC Middle East and Africa // [Twitter](#)

## **Taking Advantage of Britain's Leading Digital Healthcare Innovations**

The National Health Service (NHS) in the United Kingdom is the largest single-payer universal health care system in the world, and many British healthcare technology startups got their start there. These businesses have been in the forefront of healthcare innovation in a variety of areas, including electronic health record management, patient self-care, and remote monitoring.

British digital healthcare companies have been making waves in the Middle East for the past 18 months and beyond. The innovative British patient-flow management firm Intouch with Health, for example, has signed a contract with a major Qatari hospital network to integrate and monitor its appointment scheduling on a single data-rich dashboard.

Patients Know Best (PKB), with headquarters in the United Kingdom, is present in Bahrain, Oman, and the United Arab Emirates and provides patients and medical professionals with access to the full patient health record. Millions of patients all across the world are able to consolidate their medical records into a single location thanks to PKB, which already delivers the personal health records of England's NHS App.

Pioneering British organisations like Helicon Health, which has its origins at University College London, are in talks with officials from Saudi Arabia, Qatar, and the United Arab Emirates to bring its remote monitoring technology for early stroke identification and prevention to the Gulf. Helicon aids in the identification of individuals who are acutely ill but are not receiving the appropriate care by using machine learning to EHRs.

Scotland's Tactuum, in a similar vein, is in discussion with a number of public and private healthcare facilities in Saudi Arabia and Qatar to facilitate improved healthcare team decision-making by the provision of instant, anywhere access to vital guidelines, paths, and protocols. The Quris platform may be accessed on any device with an internet connection, including computers, smartphones, and tablets.

CMR Surgical, a company based in the United Kingdom, aims to revolutionise surgery for millions of patients all around the world, including those in the Middle East. The next-generation surgical robot Versius was developed by CMR to help surgeons conduct more complex procedures through keyhole surgery by increasing their precision, accuracy, and dexterity. CMR has established operations throughout South Asia and is now in negotiation with healthcare providers in the United Arab Emirates and Kuwait.



## **Gulf hospitals increasingly rely on digital health to combat lifestyle-related illnesses**

Healthcare systems in the Gulf have been under unprecedented strain due to the pandemic, and the area has been forced to reevaluate its health practices, notably in tracking infections and treating patients remotely, like the rest of the world.

But as the storm passes, we learn vital lessons about healthcare policy and see a rapid acceleration of trends toward digital healthcare.

Industry Data Forecast estimates that by 2020, the Middle Eastern and African e-health market will be worth \$989m, increasing at a CAGR of about 13%. E-health refers to the use of information technology and electronic communication to improve the quality, efficiency, and affordability of healthcare delivery.

Global Market Insights predicts that the digital health business, which includes mobile health, telemedicine, AI, and big data, will be valued US \$504.4 billion by 2025.

Cancer and diabetes are just two of the many NCDs on the rise in the Middle East, both of which are directly attributable to people's increasingly unhealthy and sedentary lifestyles.



More than 55 million persons aged 20–79 were living with diabetes in the Middle East and North Africa (MENA) region in 2019, and this number is projected to climb to 108 million by 2045, according to the International Diabetic Federation. As a result, local governments are increasingly relying on technology to monitor chronic patients' adherence to treatment plans and identify patterns in the spread of disease.

### **Leading the charge in healthcare innovation**

The Gulf is leading the way in healthcare disruption and transformation, says Aaron Han, consultant, infection control and informatics at King's College Hospital London - UAE in Dubai, and the epidemic has accelerated the regional use of healthcare technology.

According to Han, "Covid-19 highlighted the importance of health and its tight connectivity with the economy, spurring investment in building and deploying the digital platforms and infrastructure needed to scale and make an impact on health and wellbeing."

Big data and artificial intelligence were among the helpful technologies deployed during the pandemic. EMRs, telemedicine, app-based medical interactions, and data sharing are all on the rise.

According to Han, innovative regional health technologies are increasingly being used to facilitate personalised and individualised approaches to the management of chronic diseases.

He also noted that big data analysis and point-of-care monitoring devices will be crucial.

Funding for digital health initiatives continues to rise

According to Jebin George, programme manager, industry solutions at IDC Middle East and Africa, the rise of digital health initiatives has made healthcare one of the fastest-growing sectors in the Gulf area.

According to George, money will mainly go into three things: telemedicine, data-driven healthcare, and smart automation.

Data-driven care incorporates data sharing across the entire healthcare system to provide a seamless patient experience; intelligent automation includes AI-enabled customer diagnosis, robotic surgeries, and internet of things (IoT)-based asset tracking; and remote health encompasses virtual consultations and personal wellness, using video-conferencing and wearables.

According to George, digital health efforts are helping medical facilities in the Gulf improve their productivity.

"The top objective for healthcare providers is streamlining processes and lowering expenses," he said. This is accomplished through the use of "process automation," "data-driven insights," and "IoT-enabled asset management."

According to George, "Patient Experience" is an important focus for hospitals in the Gulf. "It is crucial to use digital technology to deliver a unified experience for patients," he continued, "including location-agnostic treatment and a simplified in-hospital experience."

# MAKING ENVIRONMENTAL CONSIDERATIONS PRIMARY IN THE HEALTH FIELD

Observing World Environment Day only once a year seems odd. Every day of the year, we should be thinking about and acting in ways that protect the environment because of the growing threats posed by things like climate change, biodiversity loss, and pollution.

People, society, and the earth all need to be healthy if we are to have a future together. Climate negotiations will focus on the Middle East and Africa over the next two years, with COP27 taking place in Egypt this year and COP28 in the United Arab Emirates in 2023.

Still, the global emergency affects everyone in some way. To guarantee the COP discussions drive the dramatic changes necessary to restrict temperature increases to less than 1.5 degrees Celsius, the business sector has a crucial role to play in cooperating with governments and the third sector.

## **Contributing Significantly**

Businesses need to demonstrate their dedication to sustainability and environmental protection in more ways than just words. All businesses, no matter how big or little, have a responsibility to act now to reduce the impacts of climate change and to develop strategies for coping with the effects of climate change in their local communities and throughout the world.

Some people may be surprised to learn that the healthcare sector, which includes everything from medical practices to the production of pharmaceuticals, accounts for about 4 percent of global greenhouse gas emissions.

Healthcare would be the world's fifth-largest emitter if it were a country. The healthcare industry must take responsibility for its actions and play a crucial part in reducing emissions if the world is to meet the internationally agreed targets to limit global temperature increases.

Since AstraZeneca recognises the link between healthy people and a healthy planet and is confident that it is possible to offer life-changing medicines in a way that is both respectful of our planet and beneficial to society, the company has taken significant steps to reduce its carbon footprint.

Ambition Zero Carbon is a programme funded by a \$1 billion investment to reduce carbon emissions to zero and strengthen supply chain resilience. Our climate strategy as a biotech firm is in line with current research. We were one of the first seven firms in the world to have our net-zero targets confirmed by the Science Based Targets Initiative using their new Net-Zero Corporate Standard.

### **Building a more robust ecology**

AstraZeneca is working across the Middle East and Africa on a variety of programmes aimed at halting the climate disaster and constructing more resilient communities, in addition to its global efforts to integrate sustainability into corporate operations.

AstraZeneca has recently created the Ghana Living Lab in collaboration with the Circular Bioeconomy Alliance. Over the next decade, this community-led initiative will plant 4.5 million trees in an effort to restore natural forests, woodlots, and fruit trees by incorporating both traditional and modern methods of tree care. This innovative public-private partnership helps local farmers increase their social and environmental resilience and motivates them to take action in the direction of a circular bioeconomy.

To prevent electronic trash, such as obsolete mobile phones and electrical cables, from being dumped in landfills, AstraZeneca's Turkish offices are working with the country's first electronic recycling plant.

Instead, a non-profit group dedicated to reforestation in Turkey, the Turkish Foundation for Combating Soil Erosion, will benefit monetarily from the waste's sale. Green roofs are being installed in schools across Egypt thanks to a collaboration between the Swedish Embassy and the

the Egyptian Ministries of Education and Environment, making classrooms more sustainable and educating the next generation about the need of protecting the environment.

### **The UAE National Nutrition Strategy 2022-2030 has been released by the UAE Ministry of Health and Prevention**

The United Arab Emirates (UAE) Ministry of Health and Prevention (MoHAP) has released the UAE National Nutrition Strategy 2022-2030, which provides a detailed plan for creating a sustainable food system that prioritises the health of its population.

The UAE Minister of Health, H.E. Abdulrahman bin Mohamed Al Owais, commented on the new strategy, saying that the MoHAP will be implementing it in collaboration with other stakeholders, using clear coordination channels, and basing all policies on its "One Health" concept. "One Health" is an integrated and unifying tool for the joint assessment and control of zoonotic diseases.

H.E. Al Owais has said that the government will "do all possible" to reduce the incidence of lifestyle-related disorders and improve the outcomes of national health indicators. The National Nutrition Strategy 2022-2030 will help





UAE Minister of Health, H.E. Abdulrahman bin Mohamed Al Owais // Wiki

enhance data based on defined criteria for monitoring progress and evaluating results, and it is "driven by the National Strategy for Wellbeing and the We the UAE 2031 Strategy."

In the presence of Salem Al Darmaki, Advisor to the Minister of Health and Prevention, Nouf Khamis Al Ali, Director of the Health Promotion Department at MoHAP, and 22 other representatives from government and private sector organisations, the strategy was unveiled at an event at the Etihad Museum in Dubai in November.

Al Darmaki remarked that the strategy's ultimate goal is to enhance nutrition for people of all ages, from pregnant women and their infants to school-aged children and young adults as well as the elderly. In addition, he said, "we must also address dietary risk factors and work to prevent all forms of malnutrition."

Meanwhile, Al Ali emphasised that the National Nutrition Strategy 2022-2030 will adopt data-based interventions to create an environment conducive to good nutrition and to develop implementation solutions for optimal infant and child nutrition, building on the progress made by previous strategies, programmes, and other complementary policies.

Supporting the federal policy to combat childhood obesity and promote maternal and child health, national standards for preconception care, "the newly unveiled approach will also help build healthier school settings and coordinate efforts to encourage healthy eating habits," Al Ali stated.

Among the goals of the National Nutrition Strategy 2022-2030 are the establishment of sustainable and adaptable food systems for healthy diets; the provision of health systems and comprehensive coverage of basic nutrition measures; the provision of social protection and nutrition education; the provision of safe and supportive environments for nutrition at all ages; and the implementation of an advanced food strategy.



## SUSTAINABLE PUBLIC HEALTH SOLUTIONS IN MIDDLE EAST GOING TO BE THE DRIVING FACTOR OF 2023

The healthcare community applauds UAE President His Highness Sheikh Mohamed bin Zayed Al Nahyan's proclamation of 2023 as the Year of Sustainability, which they anticipate would hasten the adoption of environmentally friendly procedures in medical facilities.

According to healthcare executives, hospitals are constantly looking upstream to identify ways to lower their resource use and hence their carbon footprint and increase their positive impact on the environment.

This news comes as the country prepares to host the annual COP28 climate meeting, which will take place in Dubai, United Arab Emirates, from November 30th to December 12th.

The World Health Organization (WHO) defines a sustainable healthcare system as one that promotes, protects, and restores human health in a way that reduces adverse environmental impacts and maximises potential to improve environmental quality for the benefit of present and future generations.

"As a medical education and healthcare delivery business, we have always been focused on building a robust, resilient, and sustainable healthcare system to endure continuous environmental difficulties," Dr. Thumbay Moideen, Founder and President of Thumbay Group, stated in response to the news.

Dr. Moideen continued, "We also did a pilot project of planting trees and were thrilled to see that the initiative increased the environmental impact of our service as well as patient wellbeing and team collaboration."

Despite the unprecedented challenges brought on by the pandemic, many healthcare organisations have continued to invest in environmental, social, and governance (ESG) initiatives in order to lessen the environmental impact of their operations. This includes the creation of site-specific programmes to reduce greenhouse gas emissions and improve waste management.

According to Mark Adams, FRSA, CEO (Interim), NMC Healthcare, "social sustainability in a health environment pertains to the capacity of hospitals and healthcare systems to increase the quality of life and improve wellbeing in the community, and that has been their primary focus."

According to Adams, "we issued the first set of ESG reports in 2018 and 2019 and kicked off the path as pioneers in Sustainability Reporting in the region."

Adams elaborated, saying that, "sustainability demands analysing systems, including infrastructure and organisational practises, and implementing steps in line with effective budget planning" because a healthcare institution requires dependable and resilient engineering and medical operations.

Among the ten United Nations Sustainable Development Goals (UNSDGs) that Aster Healthcare has included into its Environmental, Social, and Governance (ESG) policies is Climate Action. To align with emerging climate-policy engagement, Aster DM Healthcare recently signed the Action Declaration alongside 50 of the world's largest corporations, according to Dr. Azad Moopen, founder chairman & managing director, Aster DM Healthcare. The COP27 summit was held in Sharm el-Sheikh, Egypt, and concluded on November 2.

In addition to our work at the corporate level, we also run an extensive community outreach initiative called Aster Volunteers in the countries of India, the Gulf Cooperation Council (GCC), and Africa. Dr. Moopen also mentioned that a task-force would be established to monitor and facilitate our ESG obligations and report any difficulties to the highest level for urgent action.

CEO of Burjeel Holdings John Sunil said the UAE places a high priority on the President's proposal as part of its development agenda.

A devoted healthcare service provider, Sunil reaffirmed the organization's dedication to "bold sustainability goals," including those related to the environment and the provision of affordable healthcare and social programmes.





Through Energy Conservation, Water Management, Waste Management, Reprocessing, and other social and philanthropic projects, we work to make real improvements in the quality of life for the people who live in the places we serve. Sunil elaborated, "We support the UAE's national sustainability initiatives with great pride."

The key to developing sustainability in healthcare, according to Dr. Raza Siddiqui, executive director of RAK Hospital, is incorporating sustainability in corporate operations and pushing for improvement in controlling environmental impacts.

Sustainable healthcare must prioritise people's happiness and health to promote preventative care and lessen their negative effects on the planet. Dr. Siddiqui argues that buildings that prioritise healthy residents by include features like green areas, ample natural lighting, renewable energy, and recyclable materials will be better equipped to withstand the effects of climate change.

An increase in healthcare IT spending will lead to better environmental and health results. Dr. Siddiqui further explained that showing sustainability leadership will open doors for public-private partnerships, the maintenance and improvement of existing sustainability efforts, and the pursuit of a smaller ecological footprint.

### **Fameco aiming for more sustainable future through refurbishing**

While Fameco's roots are in the medical device industry, the company's expertise has expanded to include analytical chemistry instruments and hospital equipment. The organisation takes a green stance by recycling used medical equipment and purchasing it back from clinics, hospitals, and labs. This equipment is then refurbished using an ISO 9001-approved procedure that guarantees not just the highest quality in appearance but also in performance. Fameco is able to provide pristine, pre-owned medical equipment due to their expertise and meticulous practises. Systems are refurbished on demand to meet the specific needs of each customer. The company is flexible and quick to respond to the needs of its suppliers and clients, delivering high-quality equipment as soon as possible while also offering individualised services such as delivery, technical support, and warranty coverage.




Gulf Cooperation Council Headquarters in Riyadh



### **GE making inroads**

GE Healthcare, a market leader in medical technology and diagnostics, is reducing the environmental impact of even the largest pieces of medical equipment by adding efficiency features and utilising digital technologies. It's helping the healthcare sector in the Middle East by offering solutions that give a full picture of patients' conditions in a given care setting, hospital, or health system in real time. Besides aiding clinical teams in providing responsive, timely, and compliant care, the company is thereby allowing the healthcare industry to minimise its carbon footprint and support countries in achieving their climate goals.

Patients in intensive care units (ICUs) in rural and outlying Middle Eastern hospitals, for example, benefit from around-the-clock monitoring with the help of cutting-edge software that compiles data from a variety of sources on each patient and keeps a vigilant eye out for any A trained tele-intensive care unit (ICU) team is notified of any sign of deterioration and works in tandem with the hospital's bedside staff to ensure the patient receives prompt, appropriate care. With the help of this tele-ICU solution, Saudi Arabia is on track to become carbon neutral by the year 2060. Countries like Qatar and Turkey have used the remote consultation solution as well.



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# GREEN HOSPITAL BUILDING CONSTRUCTION IS SPRAWLING ITS NEXUS IN MIDDLE EAST

**D**epartment of Health - Abu Dhabi (DoH), the Emirate's healthcare sector regulator, unveiled its sustainability targets for the sector in connection with Abu Dhabi Sustainability Week 2023.

The targets call for a 20% reduction in carbon emissions by 2030 and a Net Zero level by 2050. By establishing these targets, the DoH hopes to guide the Emirate's healthcare sustainability efforts and quicken the pace of ecosystem-wide alignment.

The infrastructure, operations, and healthcare waste are the three main pillars of the Department of Health's healthcare sustainability strategy, which is broken down into long- and short-term targets. The Department of Health (DoH) will collaborate closely with healthcare facilities to facilitate the sector's adoption of green building approaches, such as the use of renewable energy sources and the use of recycled and natural materials during hospital construction and upkeep.

"DoH continues to lead the sector's sustainability strategy by assuring the availability of a strong roadmap and by equipping the healthcare ecosystem with the means to achieve sustainable operations," Dr. Jamal Mohammed Al Kaabi, Under-Secretary of DoH, said. The sustainability targets unveiled today aim to pave the way for future strategic objectives that will aid in the improvement of future generations' quality of life and the security of the Emirate's healthcare system. We are dedicated to maintaining our focus on making all levels of our organization's operations more conscientious and inventive, which reflects Abu Dhabi's status as a top medical tourism destination.

Health care will receive the Department's backing as it strives to be a leader in sustainable practises in areas including chemical use, food and supply procurement, transportation, and water use, and the Department will also work to ensure that locally grown, healthy food is encouraged and supported.

The Department of Health (DoH) has issued new guidelines in an effort to help healthcare facilities reduce, process, and safely dispose of healthcare waste in light of the global focus on waste management.

"The introduction of the healthcare ecosystem's sustainability targets will allow us to develop a robust governance model for Green Hospitals across the Emirate, over the next few years," said Hind Al Zaabi, Executive Director of Healthcare Facilities at DoH. Together with our industry allies, we are creating a system of certification and labelling for "Green" hospitals in Abu Dhabi. In addition, the healthcare quality index in the Emirate, known as "Muashir," will be supplemented by a new sustainability index called "Emerald Muashir" to guarantee consistent implementation of these standards and encourage healthy competition across the industry. After "Emiral Muashir" is released, hospitals will be able to earn certifications that demonstrate how well they've incorporated sustainability principles and practises.



In the short term, the Department will provide the sector with access to worldwide networks like the International Hospital Federation and Global Green and Healthy Hospitals to provide them with the training they need to learn about and explore the topic of sustainability over the next year. At the same time, the Department of Health plans to increase its ties and collaborations with prominent worldwide organisations in order to share its knowledge and skills in sustainability with them.

The Department of Health (DoH) has just released the "Part 5-Sustainability Guidelines" on the Stem website. These guidelines are meant to help the healthcare industry reach its sustainability goals and make a positive impact on the Emirate's infrastructure and environment. There are three major tiers to the DoH Health Facility Guidelines, and the first of these tiers will soon become necessary for all healthcare facilities, whether they are brand new or already in operation.

The Department of Health (DoH) will collaborate closely with other stakeholders in the healthcare system to reevaluate current prescription procedures and implement effective methods for managing pharmaceutical waste in the Emirate. Additionally, the ecosystem is urged to cut down on water use and increase the use of environmentally friendly modes of transportation.

The United Arab Emirates' hospital has earned the region's first-ever top Green Building accreditation. One of the major green building certification programmes in the world has awarded its highest rating to a hospital in the United Arab Emirates, making it the first hospital in the Middle East to get this honour.

Platinum certification in the Leadership in Energy and Environmental Design for Existing Buildings: Operations & Maintenance (LEED EBOM) rating system was granted to Zulekha Hospital Sharjah by the United States Green Building Council. This system recognises excellence in green building conception, development, exploitation, and upkeep.

"Becoming the first healthcare organisation awarded Platinum LEED certified in the Middle East is a testimony to our long-term dedication to being an environmentally conscious and responsible business," stated Taher Shams, Managing Director of Zulekha Hospitals.



We are honoured to receive this recognition from the U.S. Green Building Council and remain committed to our mission of protecting the health and safety of our patients and the community at large through the provision of superior healthcare services and the proactive maintenance of a healthy natural environment.

Sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation in operations, and regional priority credits are just some of the categories that businesses must excel in to receive the LEED certification. To date, only three hospitals in the United States have earned the Platinum level of accreditation.

During the construction process, Shams said, "we did an initial assessment and integrated various unique sustainable features into the facility to produce a highly sustainable building that symbolises our devotion to the environment."

There are both outpatient and inpatient services available at Zulekha Hospital Sharjah, making it a fully functional hospital and diagnostic centre. In 1992, the hospital opened with 30 beds and basic capabilities for gynaecology, obstetrics, surgery, medicine, and paediatrics; currently, the hospital has 32 specialties and 150 in-patient beds.

Zulekha Hospital Sharjah, located on a sprawling 240,000 square feet, employs more than 1,800 people, including 300 licenced medical physicians, 1,000 registered nurses, and a slew of other medical professionals.



Hind Al Zaabi, Executive Director of Healthcare Facilities at DoH // Arabian News

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## MIDDLE EAST HEALTHCARE SECTOR AIMING TO LEAD THE GLOBAL RACE: LATESSH JAIN SEN

**H**ealthcare in the Middle East and North Africa has improved dramatically over the past few decades, with a corresponding uptick in the general health of the region's people. However, the region is still dealing with major and varied political, economic, social, and health challenges, such as the rise of non-communicable diseases, and the persistence of war and refugee crises in some countries. The people of the Middle East come from a wide variety of cultural and historical backgrounds, as well as economic strata. Therefore, there are differences in health because of the various approaches taken by different countries to health management, levels of access to health care, and amounts spent on health care.

Some nations in the region have underfunded healthcare systems, while others can run efficiently on a much larger scale. Many people from all over the globe seek treatment at local hospitals, which have become international destinations in their own right. In Saudi Arabia, both citizens and ex-pats in the government sector are eligible for free medical treatment through the country's healthcare system. The majority of the country's hospitals fall under the purview of the Ministry of Health. The United Arab Emirates (UAE) is well-known for its excellent ophthalmology, dental care, cancer therapy, and cosmetic surgery facilities. Patients come from all over the world to receive treatment there. According to the 2020 Global Index of Hospital Innovation, the United Arab Emirates came in at 22nd position.

Stretching further on such developments, Latessh Jain Sen , A seasoned healthcare Cost expert and Founder and Group CEO - Arterial Health Grids stated, "It has served me well to have experience in both the Indian healthcare system and the Middle Eastern healthcare system. As a result, I feel confident in saying that the healthcare infrastructure in the Middle East can be anticipated to expand rapidly in the coming years. It's ripe with possibilities, but it also comes with risks."

"Since you've asked me to provide an overview, let's talk about some of the trends we've noticed in the Arab healthcare industry recently. When I say "Middle East," I mean "MENA" (Middle East and North Africa). And I am aware of the sector's tremendous development potential. Even the government strategy for 2030 supports this.





By 1984, when the hospital was an expanding institution, it was recognized as Delhi's premier multi-specialty hospital. It included General Surgery, Dialysis, Ophthalmology, and Intensive Care and Critical Care.

The hospital has always supported economically challenged patients and participated in all local and national health programmes.



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Even though, that's a bold claim, the government certainly demonstrated its ability to provide quick, effective, and easily accessible health care during the COVID epidemic. Saudi Arabia is a key player in this area, and the country has developed a bold plan for the year 2030 that prioritizes healthcare reform."

Even the government strategy for 2030 supports this. If a healthcare change strategy is described as "comprehensive," "effective," and "integrated," it indicates that it offers these qualities to its users. As a result, an integrated health system implies that the healthcare system as a whole must be considered.

"So, when I predict what will happen in the future, I predict that health insurance will become more widely available. The United Arab Emirates and Saudi Arabia have shown positive trends in Arab health or health insurance coverage. Other countries are now working to provide and increase health insurance coverage for most of their populations. Additionally, the rise of internet healthcare is a promising development and that is essential when discussing e-hospitals, e-pharmacies, and telemedicine. Although the market for digital health goods is anticipated to grow to around US\$4 billion by 2026, just in Saudi Arabia and the United Arab Emirates. As a result, the Middle East is quickly becoming a hotspot for medical tourists, a trend that bodes well for the region's continued progress toward digitalization and the changes it entails. Once primarily focused on Thailand and India, medical tourists are increasingly drawn to other parts of Asia as the Middle East grows in population. Too much money is being put into the medical system's infrastructure. As a result, expansion and widespread implementation are anticipated outcomes," opined Sen.



Latessh Jain Sen



## **Sustainability Will Be Driving The Middle East's Healthcare Sector**

The President of the United Arab Emirates has rightly proclaimed 2023 to be "The Year of Sustainability." Many healthcare organizations are now investing in what is being termed ESG initiatives (environmental, social, and governance). And despite the unprecedented challenge posed by the pandemic, healthcare stakeholders and the government is investing in technology that will improve the health system's capacity for health outcomes and healthcare cost reductions, sustainable solutions, and attract both clinical research development and new patients. A sustainable health system, then, provides both high-quality, cost-effective treatment and minimal environmental damage.

"Out of the 27 years of my career, 20 years I have spent in healthcare. According to my research, between 75% and 80% of healthcare waste may pose significant risks to both the ecosystem and patient safety due to the presence of infectious materials. As a result, garbage management and other resource-intensive processes require close collaboration between government and health administration "said Ms. Sen.

Using a mix of strategies, including the implementation of energy-efficient lighting like LEDs and the optimization of installations and precise systems, the healthcare sector can make efficient use of renewable energy sources like solar, wind, and hydro. To produce clean and renewable energy on-site, hospitals should be encouraged to invest in or partner with renewable energy infrastructure like solar panels and hydropower systems. They will be less reliant on the networks and will still have access to some electricity even when the power goes out.

Therefore, by 2030, just in the UAE, switching to renewable could produce additional net annual savings of approximately US\$1-US\$3 billion. the positive effects on human and environmental well-being are taken into account. If they can achieve that level of efficiency by 2030, the world could save between US\$1.9 and US\$2.0 billion per year in fossil fuel savings and energy expense savings from the increased adoption of renewable energy sources. To top it all off, it helps out and accounts for nearly 10% of the total energy production in the nation. The Kingdom of Saudi Arabia has set a target of a 50-percent-renewable-energy to-50-percent-fossil-fuel energy balance by 2030. Furthermore, if one looks around this area, one'll notice that green hospital notices are popping up all over the textbooks. The focus is now on encouraging eco-friendly modes of transit, decreasing water consumption, and increasing the use of renewable energy sources. That being the case, progress in this area is lightning-quick.

## **Obstacles Holding The Sustainable Healthcare Growth**

The coronavirus (COVID-19) outbreak altered the status quo, compelling individuals to adjust their lifestyles to account for ever-evolving circumstances. The pandemic also necessitated extensive, fundamental changes in the healthcare industry, from operations and supply chains to customer involvement and future strategies.



Conference - Panelist at Healthcare Senate – The National Private Healthcare Business Summit held by The Indian Express Group

The position of CFOs is expanding as healthcare moves away from a reliance on inpatient hospital revenue. CFOs say that digital technologies like virtual health (68%) and core technologies like revenue cycle management (57%) are their top areas for capital expenditures.

The world's population is facing significant difficulties as the post-pandemic period begins, particularly as a result of mobility restrictions and the disruption of economic activities, despite critical restraints. It is anticipated that technology will play a significant role in healthcare transformation, and GCC nations have begun utilizing technology to streamline processes, particularly in the areas of digitalization of health records and telemedicine.

“We need to be aware of the issue before we can offer answers. Better the diagnosis, better the treatment: that's my healthcare motto. Therefore, healthcare organizations should first determine the stakeholders, then learn about the priorities and viewpoints of these individuals. They're still way behind, and they're being extremely cautious about wasteful procedures. Moreover, there is a major distinction between expenditure and trash. Accordingly, I propose performing an exact cost analysis, after which you can zero in on the excess and zero in on the answer. So this has three steps, Long term sustainable solution lies in correct identification and proper audits. Just as when we do Activity based costing, we are able to identify the resource utilization on each and every process/ service. And it help in identifying the under utilized resources” opined Sen.

She further added that if you're advocating for long-term sustainability as an answer, you need performance initiatives to boost efficiency and generate steady expansion; rapid but fleeting expansion isn't a viable option. Quality of treatment, customer satisfaction, employee engagement, cost-effectiveness, and revenue growth are all important metrics for any successful business or healthcare organization, so using a balanced scorecard is essential.



Therefore, it is crucial to conduct ongoing research, adopting some new cost-saving efficiencies to lessen the financial burden of the inputs. Moreover, regulating the rate of increase in tariffs from time to time. For instance, the Federal Ministry of Health controls the cost and selling prices of medicines, thereby regulating the profit margins on locally listed medications. The key is to strike a healthy equilibrium, and there are a few areas where we might fail to do so.

### **Government Paving Way For Sustainable Healthcare Domain In The Region**

In recent years, the region has been actively investing in renewable energy, particularly solar power. The UAE, for example, is home to the world's largest single-site solar power plant, the Noor Abu Dhabi, which has a capacity of 1.17 GW. Saudi Arabia also has ambitious plans to generate 50% of its electricity from renewables by 2030. Also The region has a long history of water scarcity, and several countries in the region have implemented innovative water conservation measures. Qatar has implemented a "zero-liquid discharge" policy for its desalination plants, which means that all wastewater is treated and reused. The UAE has also implemented several water conservation programs, including a "Green Building Regulations" program that requires all new buildings to meet strict water efficiency standards. And so, the administration is putting in a lot of effort in that regard. However, when discussing the players, and healthcare organizations, one must say that currently, the region is witnessing wonderful and very encouraging efforts by some private players as well, like Aster Healthcare, who have incorporated 10 UN SD SDGs into their operations. So, their dedication to keeping tabs on and making use of the available resources is truly amazing. Saudi German Hospital , and their commitment to monitor and utilize resources is remarkable.

Mediclinic Middle East, a hospital operator in Abu Dhabi, has signed a clean energy supply agreement with EWEC (Emirates Water and Electricity Company). The agreement will see EWEC's clean energy sources powering 100 % of the electricity consumption of Mediclinic's Abu Dhabi hospitals and medical centers for a full operating year.

The Abu Dhabi Department of Health, for example, has announced a new sustainability index "Emirald Muashir" to be added to "Muashir", the Emirate's healthcare quality index. Following the launch of "Emirald Muashir" healthcare facilities will be granted specific accreditations that showcase their levels of adaptation to the sustainability goals and guidelines. That's why I'm confident in saying that, yes, a sufficient number of projects are available. Dubai's healthcare city initiative to use sustainable materials and design to reduce energy consumption is supported by governments in the Middle East because it is green and efficient. There is only one unified sustainable procurement strategy for hospitals in countries like Jordan. As a result, they promote green shopping and the purchase of eco-friendly goods.

"The Department of Health, Abu Dhabi has also signed an MOU with the Geneva Sustainability Center to develop programs for healthcare professionals to expand their skills and expertise in the area of sustainability. And they aid in preparation and provide resources. Examine the organizational shifts that need to be made; you probably already know the answer. It's important to have the desire to solve the issue before you can learn about the issue and then move forward with finding a remedy," commented Sen.

When Ms Latessh Jain Sen is "off the break," that implies she is totally off the grid, a rare sight, she chooses to spend that time with her loved ones. Also, she thinks it's important to realize the magnitude of mental health problems following COVID, which is why she believes that the best treatment for a healthy mind is talking to close family members.



## TASNEEM MAHMOUD: KEEPING SUSTAINABLE HEALTHCARE ON THE CENTRE STAGE IN SAUDI ARABIA

The environment should be at the centre of our mind and the guiding force behind every action we take. To ensure the annual COP negotiations drive bold changes, the private sector has a crucial role to play in partnering with governments and the third sector.

Healthcare would be the world's fifth-largest emitter if it were a nation. Achieving the globally agreed-upon goals to limit global temperature increases will require the healthcare sector to acknowledge its contribution and play a key role in reducing emissions.

Because it is possible to deliver life-changing medicine in a way that is both respectful of our planet and beneficial to society, AstraZeneca is taking significant steps to reduce its carbon impact.

The Ambition Zero Carbon initiative has a US\$1 billion budget to reduce carbon emissions to zero and strengthen supply chain resilience. AstraZeneca has updated its climate plan to reflect the most recent findings in the biotechnology industry. As one of the first seven businesses in the world, it has had its net-zero targets verified through the Science-Based Targets initiative under the new corporate standard Net-Zero.

The 2030 vision of the KSA's is based on three pillars: a vibrant society, a thriving economy and an ambitious nation. And health and well-being is considered one of the sustainable goals.

Stretching further on the topic, Tasneem Mahmoud, Healthcare Technology Management Consultant in Saudi Arabia, "Since sustainability has been central to Saudi Arabia's Vision 2030, the country has been working towards its goal of net zero emissions by 2060, Decrease carbon emissions by more than 278 mtpa and increasing the domestic generation capacity from renewable energy to 50% by 2030.

"This vision, I believe, in addition to using more eco-friendly materials in hospital layouts will include a safe way to dispose of end-of-life medical technology and medical waste. From where I sit, I can say with confidence that greater efforts have been made to enhance utilization, as well as to adopt artificial intelligence and the newest technologies in the most environmentally responsible manner possible.



“Although I agree that the Middle East has a long way to go before reaching the net-zero goal, I also believe that it now has a greater opportunity to increase its efforts in the correct directions.”

“Ultimately, it is about values re-engineering when it comes to innovation and sustainability,” she said.

While comparing Saudi Arabia to Middle East Region, she opined “The Saudi government has a crystal-clear plan for implementing more environmentally friendly policies, thanks to vision 2030. In particular with regards to the reshaping of data and the incorporation of AI.”

As a biomedical engineer, Mahmoud, works on hospital projects from the ground up, “I’ve participated in many builds’ conceptualisation and realisation stages,” she said.

“I used to determine what kind of medical equipment and furnishings would best serve the end user, then design projects around those needs.

My work includes providing civil, electrical, and mechanical engineers with all the technical data and drawings they needed to create the MEP designs, as well as taking into account the site’s specific safety and environmental constraints, such as traditional shielding, humidity, noise level, etc,” she said.



“We recommend the most suitable space to accommodate approved medical technology based on accredited international standards and guidelines.

“When it comes to renovation projects, I conduct technical assessments of existing medical technology and make recommendations for its reuse, based on technical records and a history of patient safety concerns,” she added further.

### **Women Dominate The Healthcare Sector**

“There has been a vast presence of women in medical professionals for a long time. But the construction sector was limited to men in many Middle East countries until a few years ago.

“This vision for 2030 highlights Saudi women as a vital component of the Kingdom's strength, with the goal of cultivating their abilities and encouraging them to employ their energy and resources in ways that will benefit society at large. Nothing else can be done but to promote this value in all sectors. Many steps have been made in Sudan since 1956 in order to realise this vision.

“Despite the unstable economic and political situation, we are pioneers in empowering women in many fields, including construction, which she entered decades ago,” said Mahmoud.

### **The Healthcare Sector Should Adopt Long-Term Sustainable Solutions**

Aspiring and enthusiastic healthcare professionals in the Middle East and Africa have come together to create an advocacy board that will revolutionise healthcare access by introducing new, consistent, sustainable, and individualised approaches. Access to Healthcare Board members come from government, regulatory, commercial, and societal sectors with a vested interest in developing and standardising monitoring solutions and programmes for healthcare access.

Key strategic members of the Board will contribute information, knowledge, insights, guidance, and valuable inputs towards the realisation of the Board's suggested solutions. Members work across boundaries to improve healthcare delivery and access, as well as address related inefficiencies.

In addition to tackling the unmet needs and challenges of the healthcare system and patients, the Access to Healthcare Board raises awareness of access solutions for patients, particularly those who are chronically ill and require specialised care and treatment.

Commenting further on adding more sustainable solutions, Mahmoud stated, “The goal of the healthcare sector transformation programme is to improve health and beneficiary services, which will lead to a more prosperous and secure future, by concentrating on four main areas: expanding access to healthcare, boosting the quality and efficiency of healthcare, reducing the likelihood of health risks, and bolstering the security of the transportation system.

“Adopting an effective integrated system is crucial to establishing a sustainable health system, as it will enable data sharing, ensure access to consistent information, and reduce duplication of services by integrating various healthcare systems across facilities. And without a doubt, this will increase the use of AI and adoption of big data solutions.”

Mahmoud believes that the region is ready for robotic surgery using augmented reality and 3D printing solutions in general and this will add another sustainable punch to the healthcare sector.

Solar and wind power are two renewable energy sources that can be used in the Middle East without a colossal outlay of capital. Unfortunately, little progress has been made in this area, and only a small percentage of healthcare providers may be using renewable energy sources. In the future, the region would like to see this altered. Even though there is potential for hospitals and other healthcare facilities in the Middle East to switch to alternative energy sources, few of them currently use this new renewable energy.

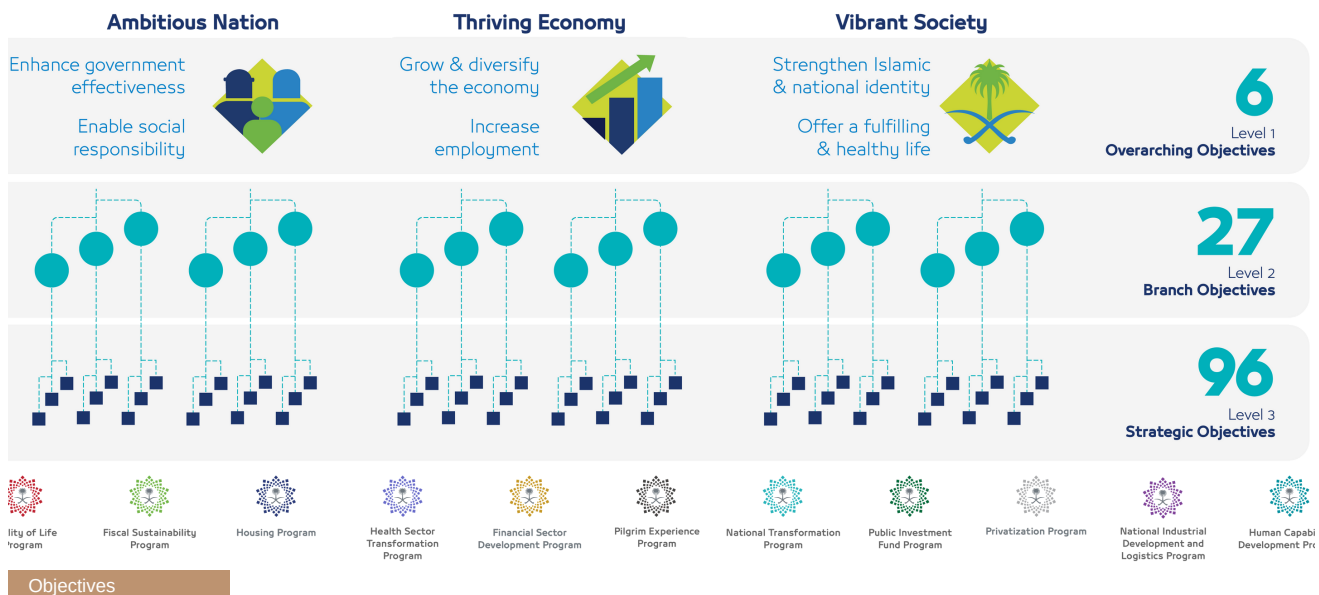
### Advanced Technology Going To Drive This Sector

The goal of the new programme is to use cutting-edge technology so that patients don't have to journey so far for treatment. The term "smart medicine" is used to describe the use of a broad range of electronic means to provide remote medical and health care.

A hospital patient, for instance, can talk to a doctor, get a second and third opinion from experts halfway around the world, and get their medication dispensed by a robot pharmacy. What was once thought of as science fiction has become a fact in Dubai in 2017 with the adoption of many of these ground-breaking techniques to enhance patient treatment, efficiency, and costs.

Further elaborating on such technology, Mahmoud said, "There is a general trend towards investing in cutting-edge equipment and methods across the board in the field of medicine in the GCC. Robotic Surgery, TomoTherapy, magnetoencephalography, transcranial magnetic stimulation (TMS), 3D Printing, and the impending implementation of Proton Therapy are just a few examples of what is considered unique and high-tech technologies where I work. Presently, there exists a widespread trend towards investing in cutting-edge technology, particularly in Saudi Arabia."

The Vision was cascaded into **strategic objectives** to enable effective implementation through Vision Realization Programs.



Digital transformation solutions are being rapidly adopted by the Saudi healthcare industry. Data scientists and AI engineers have seen new job openings in the healthcare industry and at big consulting firms like McKinsey, PwC and BCG as a direct result of vision 2030.

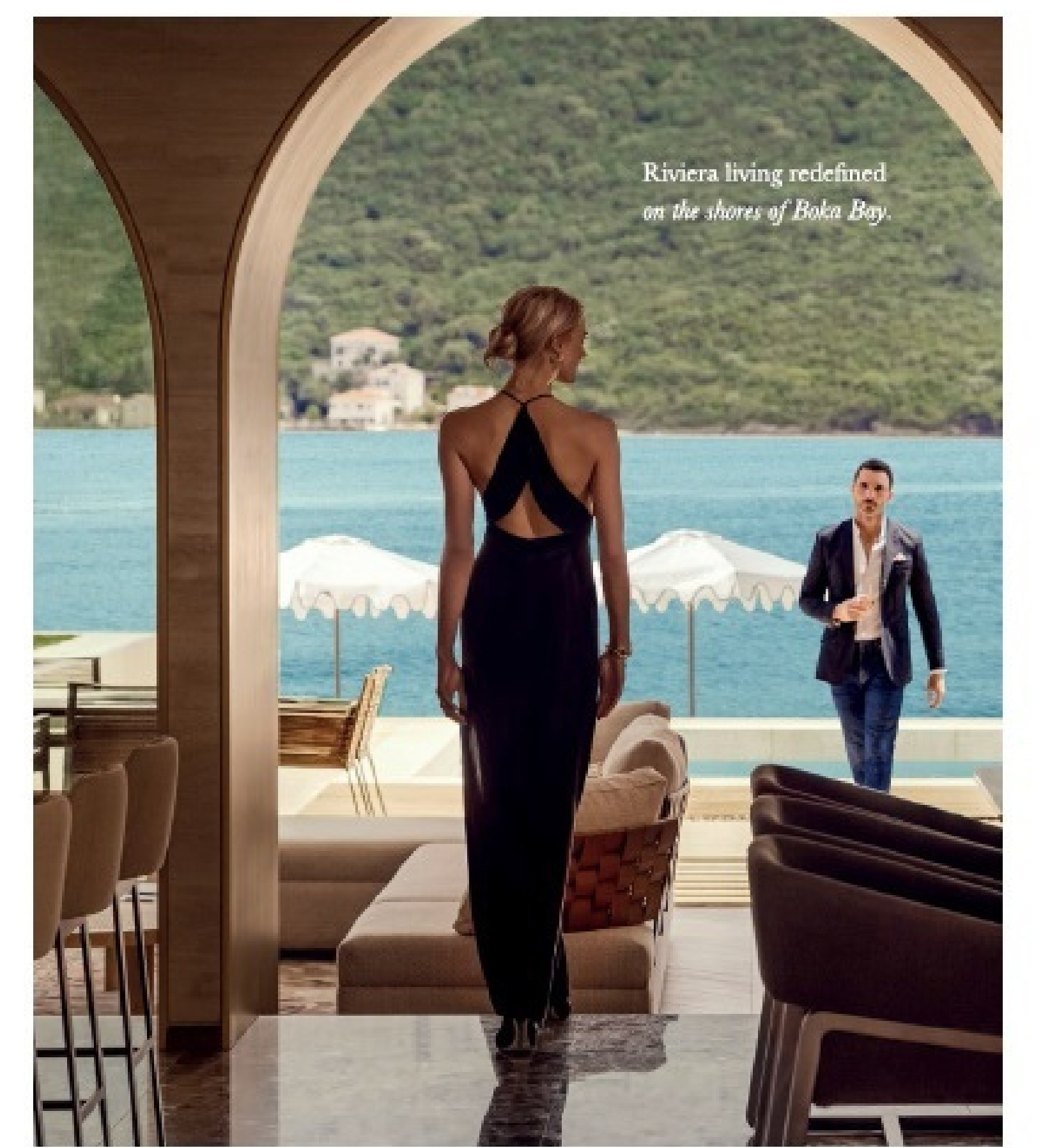
Many people in the Middle East believe that the Kingdom of Saudi Arabia is the best place to capitalise on both the market and the grid's current possibilities. The evaluation of KPIs in medical devices often requires sifting through large amounts of data. Additionally, the widespread use of HRIS standardisation grows. Because of this, a decision-making solution built on AI is required.

Tasneem Mahmood is an expert Biomedical Engineer with over 15 years of hybrid experience in the academic field and healthcare technology management, a PhD student at Brunel University (UK) and a mother of 3 who, apparently, does not have much free time, but when she does, she enjoys reading, playing the piano, and going for walks.



Tasneem Mahmood

All Photos are Provided By Tasneem Mahmood

A woman in a black, backless, floor-length dress stands on a terrace, looking out at a man in a dark blazer and blue jeans who is walking towards her. The terrace is furnished with a light-colored sofa and several white patio umbrellas. In the background, there is a large body of blue water (Boka Bay) and a green, hilly coastline with some buildings. The scene is framed by a large, arched opening in a building's facade.

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