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Middle East

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entrepreneurial road
into the UAE
healthcare sector

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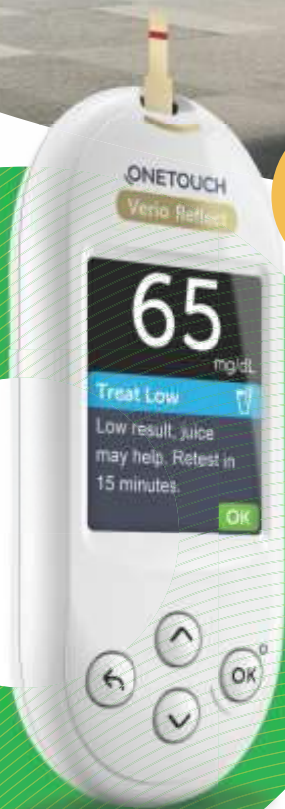
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MediWorld ME aims to create the ultimate platform to share the latest news, updates & developments from the healthcare & medical technology industry within & beyond the GCC countries

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Editorial

Medical technology sector so far

Despite a short-term downturn due to the disruption of COVID-19, the medical technology sector is set to grow in value in the years to come because of its resilience and its emerging cultural importance.

COVID-19 presented an opportunity for medical device companies due to its initial economic shock. Within the medtech industry, the main impact of the pandemic has been the acceleration of trends that were already well underway.

The rapid advancements in AI technology, device connectivity, remote monitoring and data collection have enabled medtech companies to meet the demand for critical products, such as personal protective equipment (PPE) and ventilators. As a result of its ability to scale up R&D and manufacturing efforts quickly, the sector has played an important role in relieving pressure on healthcare systems.

Although remote care was already a trend in the 2010s, COVID-19 has taken it to the next level. Since the pandemic began, 95% of physicians have increased their use of virtual technology. Before COVID-19, 80% of physicians did not use it to interact with patients.

Through the integration of medical devices into the Internet of Things (IoT), medtech organizations and regulatory bodies are working more closely with each other (as well as with healthcare providers) to improve patient outcomes. Collaboration has become a hallmark of an increasingly complex health ecosystem.

However, MEDTECH companies need to ensure their supply chains are ready to handle an 'anytime, anywhere' healthcare model as healthcare becomes more virtualized.

Ongoing advancements in medical technology and the growth of information sharing through IoT-enabled devices are causing a sea change in the healthcare industry. We're seeing an emphasis on patient monitoring, data collection for R&D, and higher quality care for patients, which is all driving demand for higher bandwidth networks and greater Internet access across the globe.

Just as changes to working patterns and consumer behaviors have facilitated the need for remote technologies, so too has the evolution of the relationship between patients and physicians. As the COVID-19 pandemic demonstrated, the medical device market is more than ready to meet this demand for user-friendly diagnostics and monitoring devices.

The global medical devices industry expected to reach a valuation of \$612.7 billion by 2025, growing at 5.4% CAGR. Thanks to growing consumer demand and technological innovation, we can expect to see high growth in product areas such as wearable healthtech, robotics nanotechnology and extended reality devices. Artificial intelligence is also facilitating the creation of increasingly sophisticated data-driven algorithms, such as autonomous diagnostics.

Ramadan Kareem to all our readers!

Sincerely,

Ayesha Rashid
Chief Editor, MediWorld ME

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Non Sticky



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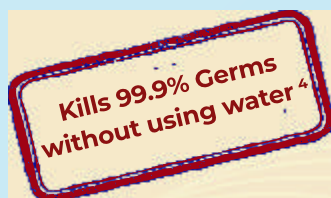
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Rub hands together until dry. Supervise children under 6 years of age when using this product to avoid swallowing.

Other information : Do not store above 30°C

Avoid freezing and excessive heat above 40°C.

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2. World Health Organization - Guide to Local Production: WHO-recommended Handrub Formulations. April 2010.
3. FDA Policy for Temporary Compounding of Certain Alcohol-Based Hand Sanitizer Products During the Public Health Emergency Immediately in Effect Guidance for Industry. March 2020.
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Adil Mirza's

entrepreneurial road into the UAE healthcare sector



Muhammad Adil Mirza
CEO of Dubai's Phoenix Group,

“There are few medicines and medical equipment's that we have introduced that are unique and that were unique at the time we introduced them to the market. Our customers were very pleased with our products. For a company that supplies pharmaceuticals and medical products to hospitals, there are mainly two things to remember. Affordable products and quality services are the keys to winning in the healthcare field,” says, Mirza



As one of the most economically developed and diversified markets in the Middle East, the UAE has a strong healthcare infrastructure. Over the past few years, the UAE Government has been dedicated to creating a first-rate healthcare infrastructure, and as a result, the sector has advanced and expanded significantly during this time.

The UAE government swiftly took preemptive health measures after the breakout of COVID-19 in January 2020. The robust efforts of the UAE's leadership resulted in the UAE becoming globally ranked as one of the top countries, and the highest in the Arab world, in terms of its COVID-19 response.

The UAE healthcare sector has

expanded in line with the nation's evolving needs, becoming a regional medical tourism hub in the process. The COVID-19 pandemic has led the UAE to redouble its commitment to investing in healthcare.

The Healthcare Market of UAE is expected to grow at a CAGR of around 10% during 2019 to 2023 (Business Wire).

Muhammad Adil Mirza, CEO of Dubai's Phoenix Group, had a powerful vision of his goals as an entrepreneur, took every step possible to leap forward in the world of business with his healthcare import business, propelling him forward as a serial entrepreneur in the UAE.

As a talented multipreneur he has traveled to over 40 countries so far and has earned noteworthy business affiliates on his portfolio globally, which includes top firms in the US, UK, and Europe for maintaining relationships with international affiliates and for future business development projects.

Mr. Mirza took some time out from his busy schedule to talk with Ayesha Rashid from Mediworldme about his time in the UAE healthcare industry, how the sector has evolved and his future expansion plans in the UAE.

Describe your entrepreneurial journey towards the UAE healthcare sector?

While studying in the UAE, I started a small company that supplied disposables to



hospitals. Over time, I acquired knowledge about products and hired people to help me with distribution.

How are you taking healthcare sector to newer heights of success across the UAE and beyond?

During our time in the healthcare industry, we owned and operated companies with offices located in seven countries (UAE, Oman, Pakistan, Uzbekistan, Tajikistan, Kazakhstan and Azerbaijan). We had one distribution from all seven countries at one time. We have introduced a variety of new and innovative products that have helped each of the above countries, especially the UAE, to treat needy patients with high-class quality. We have also introduced invasive and non-invasive surgical procedures to treat patients.

Tell us in detail about the UAE healthcare sector?

In the UAE healthcare industry, standards have changed really well over time. Anywhere in the world, you can't see a change in a short period of time. All of this has been made possible by the UAE government, which has invested time and money in companies that have introduced innovative products into an environment. All multi-national big brands of hospitals, medical centers, pharmaceuticals and medical equipment are now present in the

UAE. You will see a dynamic change in the UAE healthcare sector in 10 years. The reason is the introduction of healthcare insurance in the UAE. Medical tourism plays a larger role as well with exceptional training for healthcare workers, staff, and technicians. As a result, the UAE has grown steadily over the past decade and is still growing with an exceptional increase in new hospitals and healthcare facilities. As a whole, the UAE healthcare sector maintains quality.

Your major milestones in the healthcare sector?

There are few medicines and medical equipment's that we have introduced that are unique and that were unique at the time we introduced them to the market. Our customers were very pleased with our products. For a company that supplies pharmaceuticals and medical products to hospitals, there are mainly two things to remember.

Affordable products and quality services are the keys to winning in the healthcare field.

I want to thank my devoted team for their hard work and dedication. With our great research and development team, we attend different medical conferences around the world together and at the same time develop innovative products that will develop the UAE healthcare sector.

As one of the most economically developed and diversified markets in the Middle East, the UAE has a strong healthcare infrastructure. The location of a world-class healthcare



infrastructure is a top priority for the UAE government as a result the sector has advanced and expanded significantly during the past few years?

The UAE government has supported all nationalities living in the country to start up healthcare companies. The government provides facilities beyond expectations. When you introduce an innovative product, the UAE government supports it. Shortly put, the UAE offers a lot of services in healthcare sectors to both international and domestic brands at the same time, and this is why everyone wants to set up here and to attract healthcare recipients and patients from the Asian regions, who would otherwise have been unable to travel to the US or any of the European countries for treatment.

In your opinion, what role does technology play in the healthcare industry?

Technology is the key to good healthcare, specifically in the UAE. Technology that provides a good environment for both doctors and patients. If you have good technology and apply it to patients, patients experience less pain and at the same time receive what they need; for example, before, when procedures were performed, a small hole was made in the body to carry on with the procedure.

In modern times, this procedure is called leprosy, and you do need to cut the patient, instead technology does that work for you. One type of surgery that is common is called Robotic surgery were doctors do not need to stand with the patients to do the procedures instead, a robot does it all from the console.

How is the UAE boosting the number of medical tourist in the country?

The UAE has become the top medical tourism destination in the Gulf and Asia. The kind of facilities, treatments and prices that a patient get in the western countries to and when compared with the UAE, is much cheaper and closer to their own home country. The UAE is also doing much marketing work that seems to work on.

For instance, if you want to focus on attracting people by selling, you need a good marketing team. The UAE government is doing a great job in building up the healthcare sector and medical tourism. This is the reason why you see a lot of foreigners and expats visiting especially from countries such as India, Pakistan, Bangladesh, and Sri Lanka etc. who also live in the UAE.

What are your future plans in the healthcare sector?

Business have to evolve if they want to succeed and same goes with us. We are not manufacturers in UAE for pharmaceutical or medical devices, we are an import based company. We import from more than 45 countries and we provide quality products at an affordable price. We have an in house research and development department who continuously look for new and innovative products that are needed in the UAE market. We bring these products as an exclusive agents, we register them in the ministry of health and we introduce these products for the betterment of the country and society. Plans to start a wholesale division started almost six months back. Very soon we will have our own brand of pharmacies and medical centers. We have partnered with the countries in the Europe, USA and the local companies and we plan to introduce unique pharmaceutical molecules shortly in the UAE.

A photograph showing several surgeons in blue scrubs, masks, and caps, focused on a surgical procedure. The lighting is bright and clinical.

Dubai to develop global center for heart diseases and surgery

With a 2-day program, DHF held a number of workshops, seminars and discussion panels, where participants traced on a wide range of subjects like Dubai Care Model; excellence to Healthcare, Digital Health, Space Medicine, Value -based care and Health Economics in addition to a number of great topics that foster learning and inspiration

Dubai has an ambitious plan to develop a global center for heart diseases and surgery, the emirate's health authority revealed at the opening day of the fourth edition of Dubai Health Forum on.

Dubai Health Forum (DHF) in its fourth edition took place on the 2nd-3rd March 2022.

Since its launch in 2017, DHF has become an annual gathering for healthcare leaders, professionals and the community. It gathers a myriad of highly respected decision makers, healthcare leaders, industry experts, innovators, health institutions and organizations representing the wide spectrum of healthcare.

The event is a driver towards sharing ideas, perspectives of UAE for the coming 50 years, aspiration of the future city of Dubai, innovation approach and smart solutions, strategic goals to promoting sustainability and leadership and achieving the global competition in the health field.

With a 2-day program, the forum held

a number of workshops, seminars and discussion panels, where participants traced on a wide range of subjects like Dubai Care Model; excellence to Healthcare, Digital Health, Space Medicine, Value -based care and Health Economics in addition to a number of great topics that foster learning and inspiration.

Under the patronage of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of The Executive Council of Dubai, opened the two-day Forum at Dubai International Convention Center.

Game-changing advancements in healthcare

Later in the day, Sheikh Mohammed also toured the forum that showcased game-changing advances in health and wellbeing in line with the Vision 2071 that aims to transform Dubai's healthcare system into a world-class, cutting edge destination in healthcare and wellness.

During their tours of the Forum, Sheikh Mohammed and Sheikh Hamdan were separately briefed about the global heart center project by Awadh Seghayer Al Ketbi, director general of the Dubai Health Authority (DHA).

The project, which aims to create a prestigious world-class center for the treatment of heart diseases, will be equipped with the latest technologies and smart equipment and staffed with highly specialized doctors.

Smart monitoring

The leaders were also briefed on Rashid Hospital's Control and Follow-up Center for Cardiology that specializes in following up on the progress of heart patients in their homes after they receive treatment at the hospital.

Smart monitoring conducted by the Center is facilitated through a set of smart devices that monitor the patient's pulse, oxygen saturation, blood sugar levels and other vital indicators, which allow doctors to assess the state of the patient.

A DHA spokesperson told a local newspaper that around 50 heart failure patients aged between 25 and 80 are currently being monitored through the home care devices. The smart facility has helped provide early treatment and reduce the number of hospital visits.

The leaders also viewed Rashid Hospital's equipment for robot-assisted catheterization operations, which performs cardiac catheterization with a high rate of accuracy and safety.

The leaders were also briefed on the robot-assisted technology for knee and joint surgery used by the Orthocure Centre for Orthopedic and Joint Surgery in Dubai, the only center where the technology is being used outside the United States. Dr. Ali Al Balooshi, consultant Orthopedic and Joint Surgeon provided an overview of the technology and its benefits.



Global impact of Covid-19

In his opening remarks, Al Ketbi said the global impact of COVID-19 and the experience of dealing with the pandemic has highlighted the value of exchanging experiences and expertise.

"We need to promote stronger relations between health institutions, enhance research, constantly improve professional practices and expand the use of smart technologies and solutions. The Dubai Health Forum, which champions these goals, continues to create platforms to support the global, regional and local industry in achieving these aims. The global health community is currently focused on creating an integrated system capable of facing challenges, dealing with emergency situations and enhancing people's wellbeing."

By bringing together leading experts, he said the Forum offers exceptional opportunities to discuss such vital topics and forge a unified global vision for healthcare sustainability and human wellbeing.

In a panel discussion on 'Overcoming COVID, a national success story', Dr Alawi Asheikh Ali, deputy director-general of DHA, Dr Jamal Alkaabi, undersecretary of the Department of Health – Abu Dhabi, and Dr Yousef Al Serkal, director-general of the Emirates Health Services shared how the wise leadership, the dedicated healthcare professionals, the elaborate infrastructure, science-based approaches and commitment from the people helped the country win the battle over the pandemic. The top health officials also explained how the success in bringing the pandemic under control has better equipped the country in mitigating future crises.

In another panel discussion on 'Preparing for the next emergency', experts National Emergency Crisis and Disasters Management Authority (NCEMA), Ministry of Health and Prevention (MOHAP), and the World Health Organization (WHO) discussed the possibilities of future crises that will affect the humans, especially related to healthcare.

The event brings together highly respected decision makers, health practitioners, industry experts, scientists, doctors, health specialists and innovators and showcases game-changing advances in health and wellbeing.

More than 2,000 participants, including 60 speakers, representing more than 30 countries, are participating in the Forum. The event features more than 30 sessions, in addition to a range of training workshops, lectures and discussions.

Discussions being held at the Forum over two days are grouped under 10 main themes. Vital topics being discussed include the COVID-19 pandemic, the new normal, the path to recovery, vaccination, effective post-pandemic care, sustainable development of the healthcare industry, the role of the media in the COVID-19 pandemic, digital health, genomics, space medicine, big data and artificial intelligence, value-based care and health economics.

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Dr. Natalie Truong

Females on the Frontline

Emergency physicians treat all patients who come through the emergency department doors, regardless of their illness or injury type. In every case, immediate stabilization takes priority. Once patients are stabilized and treated, emergency physicians may then refer them for admission to the hospital or further care from other specialists as needed

Emergency department environments are often depicted as intense scenes in television and movies. But actually, being immersed in the fast-paced world of emergency medicine is one of those things you'll never fully understand until you're there.

To get a behind-the-scenes look at what it's really like working in the ER, we enlisted Dr. Natalie Truong, emergency physician and St. George's University (SGU) School of Medicine graduate. Keep reading to hear her firsthand insight from the front lines.

What is emergency medicine?

As its name implies, emergency medicine refers to the treatment of illness or injuries requiring immediate attention. No matter the facility, every emergency department (ED) is populated by numerous different medical professionals who are all working toward a common goal: to save and preserve the quality of life for patients who are experiencing some sort of physical or emotional duress.

Emergency physicians treat all patients who come through the emergency department doors, regardless of their illness or injury type. In every case, immediate stabilization takes priority. Once patients are stabilized and treated, emergency physicians may then refer them for admission to the hospital or further care from other specialists as needed.

Dr. Truong explains that a typical week in the ED will include patients experiencing varying levels of duress. "We usually see mixed acuity patients, from those with low to high asthma exacerbation to those with newly diagnosed metastatic cancer to those experiencing decompensated heart failure or heart attack," she elaborates.

What is it like working as an emergency physician?

As you're beginning to see, working in the ED is anything but predictable. As much as medical school will equip you with the knowledge needed to diagnose and treat patients, it can't prepare you for the high-stakes nature of the job.

Dr. Truong recalls just how jarring it can be at first. "I had never experienced that intense a rush of adrenaline, fear, anxiety, and uncertainty," she says. Learning about cardiac and respiratory arrests was one thing, she notes, "but to

stand in front of someone undergoing one is an entirely different story."

While the specific circumstances of any given shift are unpredictable, emergency doctors do experience some sought-after stability and flexibility when it comes to their work weeks. Physicians in this specialty generally have pre-set shifts with fixed working hours. They will find themselves working evenings, weekends, and holidays as needed, but the typical emergency physician works between three and five shifts per week.

All medical doctors begin with the same training in medical school. It's not until the medical residency where physicians-in-training really begin to hone their skills in a particular area of practice. Before you pinpoint emergency medicine as your specialization, Dr. Truong suggests doing some personal research. "Talk to as many people as you can who have experience working in the ED. This will help you grasp the expectations and see if it's the right path for you," she advises.

At St. George's University, the final two years of the MD program focus on clinical sciences, with training at SGU's clinical centers and affiliated hospitals in the United States and United Kingdom.

Clinical training emphasizes responsibility, maturity, and compassion in the development of professional excellence. Students learn how to conduct themselves as physicians, take responsibility, work harmoniously with professional colleagues, and exhibit maturity.

In the ED, every shift will be different. And while not knowing what to expect might be a source of stress for some, many emergency doctors find the mystery to be exciting. These are physicians who love a challenge. You literally don't know what will come through the door next—a mom carrying a febrile infant, an 80-year-old with chest pain or a young child with a head injury.

"To be a great emergency doctor, you have to have the drive, the discipline, the perseverance, and the passion," Dr. Truong explains. "You will do well if you are a self-starter who continually educates yourself."

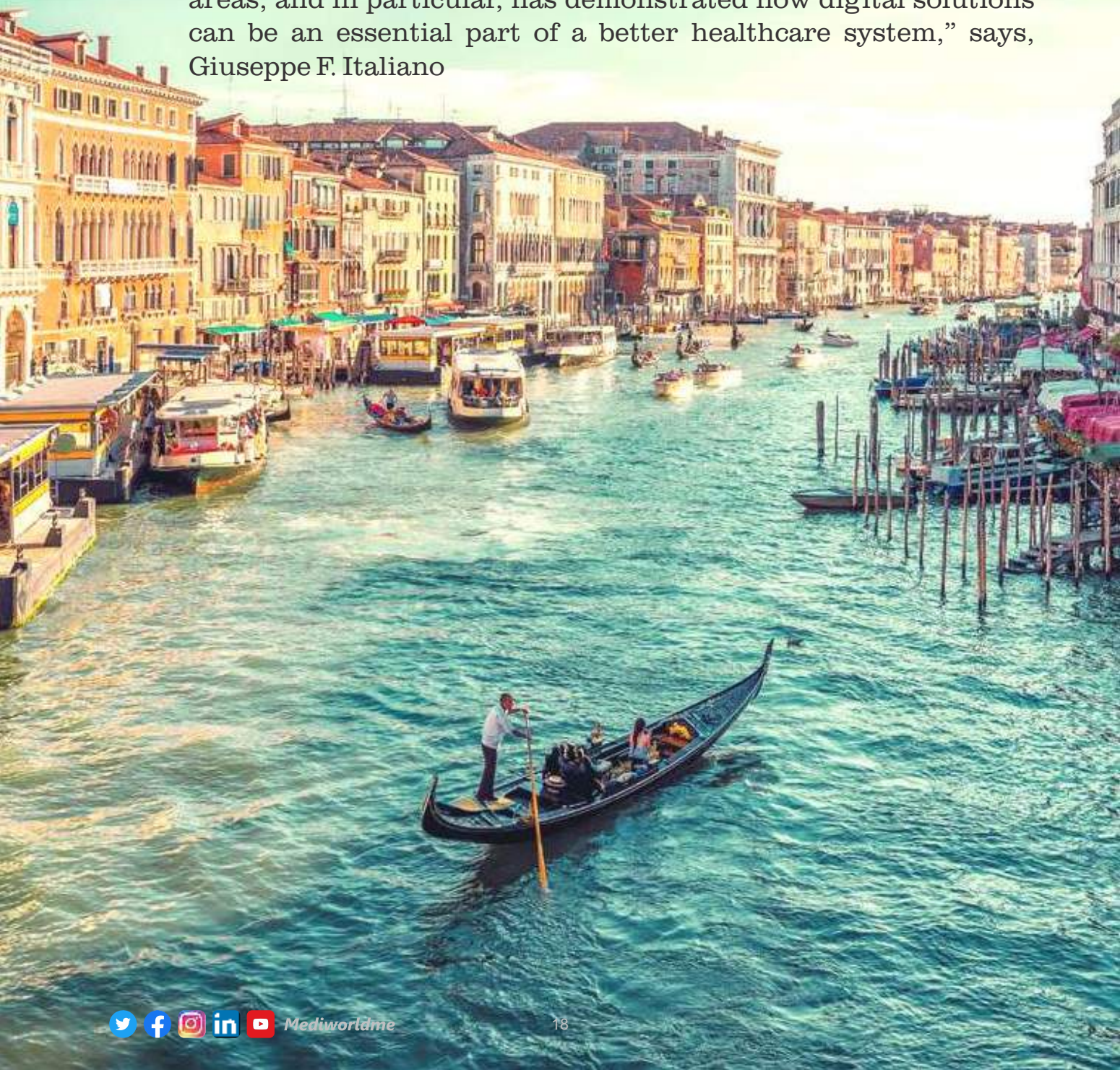
In addition to thriving in a fast-paced, fluctuating environment, skilled emergency physicians must have strong critical-thinking abilities. You'll often have to make decisions based on limited information. Patients undergoing some kind of medical emergency may be unable to fully communicate their symptoms or they could even be unconscious. The ability to keep a level head while running through a mental checklist of symptoms, diagnoses, and treatment plans is a skill that not everyone has.

"I could never have imagined I'd enjoy what I do more every day," Dr. Truong says. "Emergency medicine is a challenging but fulfilling journey. If you work hard, it will definitely pay off."

As of March 2021, St. George's University in Grenada, West Indies, is proud to have a student body made up of 53% females, who will follow in Dr. Truong's foot steps to provide excellent care and be committed to making a difference in the lives of their future patients every day.

ITALY'S state of the art ehealth services

“The Covid-19 pandemic has been an overall a big accelerator for the adoption and the acceptance of digital technologies in many areas, and in particular, has demonstrated how digital solutions can be an essential part of a better healthcare system,” says, Giuseppe F. Italiano





Italy is a country consisting of a peninsula delimited by the Alps and several islands surrounding it whose territory largely coincides with the homonymous geographical region. Located in southern Europe, Italy is also considered a part of Western Europe. With Rome as its capital and largest city, the country covers an area of 301,230 km² (116,310 sq mi) and has land borders with France, Switzerland, Austria, Slovenia, as well as the enclaved microstates of Vatican City and San Marino. Italy has a territorial exclave in Switzerland, Campione. It has around 60 million residents. Italy is the third-most populous EU member state.

The Italian healthcare sector is perhaps one of the largest in the world. There are many different companies and organizations that offer clinical services, make drugs and medical equipment, and provide healthcare-related support services like medical insurance. A key function of these companies is to diagnose, treat, nurse and manage illness, disease, and injury. Healthcare is also a very complicated industry: to provide medical services, healthcare providers who may have quite different objectives, such as doctors, nurses, medical administrators, government agencies, pharmaceutical manufacturers, and medical insurance companies, must work together continuously and closely.

Giuseppe F. Italiano, Professor of Computer Science - LUISS University, Rome and spokesperson at the recent Innovation Talk on 'Artificial intelligence applied to medicine: Italian excellence in telemedicine and telesurgery' organized by the Italian Trade Agency at the Italy Pavilion, Expo 2020, explains to Mediworldme how technology plays an important role in the Italian healthcare sector.

Tell us in detail about yourself?

I graduated in Electronic Engineering from Sapienza University in Rome, and then I moved to the United States, where I got a PhD in Computer Science from Columbia University. After completing my PhD, I had a truly inspiring experience as a research staff at the IBM T.J. Watson Research Center in Yorktown Heights, which is perhaps one of the most prestigious research labs around the world. But then I got a bit nostalgic about my country and moved back to Italy as a Professor of Computer Science. I am currently a Professor at Luiss University in Rome, where I am working on many exciting projects in digital technologies. At Luiss, I am also the Director of Masters in Data Science and Management, Masters in Cybersecurity and Masters in Big Data and Management at Luiss Business School. The constant international exposure has had a deep impact on my professional life. Most of my research is centered around algorithms, and I have been designing, analyzing and experimenting with algorithms for more than 35 years. In general, I strive to pursue research questions that are not only academically challenging, but also relate to important practical problems, and I have been actively working on the transfer of my research results into practice. In particular, I

have been consulting with several big international companies and co-founded several tech startups.

How has the Italian healthcare sector evolved over the years?

Although the AI revolution is likely to bring deep changes in healthcare systems, I believe that this has to be done carefully, by recognizing not only the AI's strengths but also its limits and weaknesses. Especially in healthcare we need AI systems which are more transparent and accountable, and can ensure a fairness treatment to all patients, by reducing biases and prejudices that are often buried deeply inside AI tools. To accomplish this, we may need to bring together experts in fields outside healthcare and digital technologies, including ethics and philosophy, sociology, psychology, behavioral economics, and understand better the complex and evolving interaction of humans and machines that are capable of learning and become better at some task as they keep operating.

What is the role of IT in the Italian healthcare system?

I would say that today digital technologies play a crucial role in many aspects of the Italian healthcare system. Indeed the need for an efficient national health service is quite imperative in Italy, and the use of digital technology fits very well in this framework. In recent years Italy has certainly made a great progress in implementing digital healthcare, and the expenditure on digital health has been steadily increasing. Most of the resources invested in this area are addressed to the digitalization of clinical departmental systems and the widespread implementation of electronic health records (EHR).

Although the popularity of EHR among general practitioners and pediatricians is still a bit uneven throughout the country, as very few regions are lagging behind, it is a common practice to use electronic instead of paper-based medical prescriptions everywhere in the country. The use of health apps and medical wearables is also picking up, and there is also a rising interest in communication apps, as their benefits get widely recognized among general practitioners. There is a lot of progress also in remote health monitoring and telemedicine services. Patients seem generally interested in embracing digital health solutions, although the greatest concern remains the lack of human physical contact with doctors, which seems to be of particular importance for Italians. The digitalization process is still ongoing and more will be done in the near future to achieve tangible results in terms of efficiency. Currently, I would say that the main challenges to be tackled are still the lack of digital skills and the skepticism towards digital methods, which is sometimes related to digital illiteracy.

In your opinion would you recommend Italy for medical tourism? Why?

People all over the world have always been attracted by the artistic and natural beauty of Italy. There is no question about that! Perhaps everybody knows that Italy has the highest number of World Heritage sites. What is less known is that the healthcare



system in Italy is considered to be one of the best in the world. We have a life expectancy at birth of more than 84 years (the 6th in the world) and according to Bloomberg, Italy is the 4th country in the world for healthcare efficiency. I guess it is difficult to match those figures. In the last years, Italian hospitals have started promoting their services internationally, by providing interpreters, medical records in the patient's language, shuttle services to and from the airport, rooms for relatives, and agreements with major hotels. I think all of this is making Italy a unique and attractive destination for medical tourism.

How has covid-19 shaped the Italian healthcare sector?

Before the Covid-19 pandemic, we were convinced to have a great national health systems. Our network of hospitals and physicians were, on the whole, world-class. Unfortunately, for Italy but for many other countries as well, the pandemic was really a shocking stress test for healthcare. Especially after Lombardy, one of Italy's richest regions, which had invested heavily in centralized state-of-the-art hospitals, became the first European hot spot in the early days of the crisis. As Covid-19 swept through Northern Italy and even the most well-funded hospitals struggled to tackle the waves of illness and death, it was clear that having excellent hospitals was no longer sufficient to hold up to such a dramatic scenario. I would say that Covid-19 forced us to rethink our public health care system, focusing less on centralized hospitals and more on making care available to patients where they need it, by investing on a network of clinics and small medical



centers. This networked structure can have a better coverage of the Italian population, which is spread over many small towns and villages.

Following best practices from some Italian regions, Italy started shifting the focus a little bit away from big hospitals, and investing more in local community care. In those community centers family doctors, who in Italy have an important traditional role towards patients, but provide their services as independent professionals in one-person offices, can work side by side with specialist nurses, psychiatrists, dieticians and social workers. Compared to often far-away city hospitals, community care centers offer the local population the possibility of frequent checkups and more personalized care, and can help keeping people, especially elderly people, healthy and in their homes as long as possible instead of filling up emergency rooms and hospital beds, which was one of the main issues with the covid-19 pandemic.

Over the coming years, the government plans to roll out more of those 'community homes' and 'community hospitals,' and to invest more in at-home care and tele-medicine, in order to bring the healthcare system closer to patients. The idea is to keep patients near their families and friends who can take care of them. Italy has one of the oldest populations in the world, much of it distributed in small towns and villages that are not easily served by nearby health facilities. Elderly people are not

always self-sufficient, making travel to the nearest hospital difficult. General practitioners will work more in teams with nurses and disease specialists to provide care close to patients who don't need to be hospitalized but do have complicated health needs.

How has Covid-19 demonstrated the need for e-health solutions to improve Italian healthcare system?

The Covid-19 pandemic has been overall a big accelerator for the adoption and the acceptance of digital technologies in many areas, and in particular it has demonstrated how digital solutions can be an essential part of a better healthcare system. Like in many other countries, in Italy many new digital health applications were developed in response to Covid-19 in order to provide citizens with better access to medical information and care. For instance, smartphone-based apps have been adopted to prevent the spread of the virus through contact tracing or by monitoring the location of individuals. In addition, many other apps and websites have been developed to provide citizens with updated information on the virus and the healthcare services locally available. In several cases, this functionality was combined with symptoms checkers that enabled end-users to obtain a preliminary assessment of their health conditions and personal recommendations on their behaviors or medication to take. In other cases, digital health applications have been developed to provide better treatments to those patients who tested positive but were not hospitalized. This was pursued by equipping the patients with wearables to monitor their health conditions or by asking them to regularly record their symptoms on an app or a website that was consulted by health professionals, who could take tailored actions or suggest specific medications. All of this has caused a deep penetration of digital technologies into the Italian healthcare system, has contributed to their wide acceptance by both patients and doctors, and has also demonstrated that we have to leverage on digital technologies as enablers for delivering more effective and efficient healthcare.



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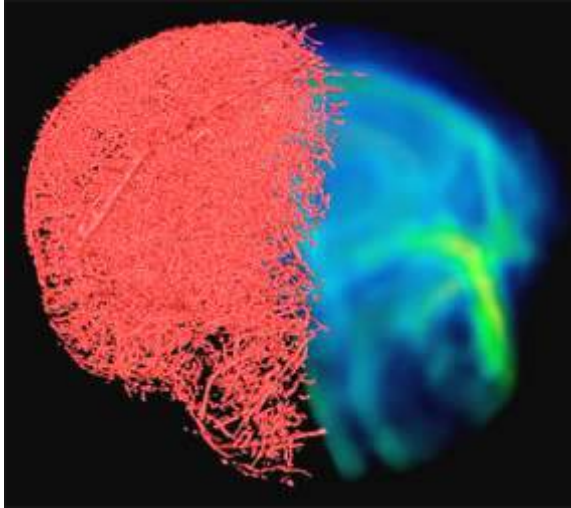
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Johns Hopkins researchers develop new imaging technique to view animal vasculature in great detail

human bodies and also within experimental animals to increase our understanding of various diseases. There are numerous techniques available to image blood vessels, such as MRI or CT scans, and they all provide slightly different information and have different strengths and weaknesses.

“Usually, if you want to gather data on blood vessels in a given tissue and combine it with all of its surrounding context like the structure and the types of cells growing there, you have to re-label the tissue several times, acquire multiple images and piece together the complementary information,” said Arvind Pathak, a researcher involved in the study. “This can be an expensive and time-consuming process that risks destroying the tissue’s architecture, precluding our ability to use the combined information in novel ways.”

Researchers at Johns Hopkins developed a new imaging technique that allows them to view the vasculature of experimental animals in great detail. Research into a variety of conditions, from vascular disease to cancer, relies on acquiring images of the vasculature in animals, with a variety of imaging techniques available. These researchers have created a unique blend of polymer contrast agents which can be perfused into the vasculature, permitting imaging using optical microscopy, MRI, and computed tomography (CT). The combined imaging creates highly detailed tissue maps of the vasculature at different spatial scales, revealing insights into cell types and tissue structures that surround blood vessels.

Blood vessels play a role in many disease states, and researchers have spent years developing and fine-tuning imaging techniques that let us view these complex and winding structures. This includes imaging within our

This new technique allows the same sample to be imaged using optical microscopy, CT imaging and MRI imaging. The approach relies on a combination contrast agent, which the researchers have called VasculiViz. It consists of a blend of a fluorescent MRI contrast agent called Galbumin-Rhodamine and a CT contrast agent called BriteVu. The relatively inexpensive polymer blend rapidly sets when perfused into the vasculature, allowing both the micro- and macro-vasculature to be imaged.

The new imaging technique allows the researchers to assemble complex visualizations of the vasculature and surrounding anatomy, providing more information than could be achieved by using just one imaging modality. “Now, rather than using an approximation, we can more precisely estimate features like blood flow in actual blood vessels and combine it with complementary information, such as cell density,” said Akanksha Bhargava, another researcher involved in the study.

German researchers create fingertip sensor

Researchers at the Max Planck Institute for Intelligent Systems in Germany have created a fingertip sensor that allows a robot, including a robotic prosthesis, to very sensitively gauge how much force is applied to it. The system is based on a camera that is mounted inside the rubbery robot finger. The camera observes the internal walls of a hollow area within the finger, which is lit using a ring of LEDs, and a neural network interprets the camera feed to accurately calculate the location, magnitude, and direction of the force applied to the finger. The system aims to offer a level of sensitivity to robotic fingers that is similar to that of our own skin, and the technology could have various medical applications, including haptic feedback for robotic prostheses and as a safety mechanism for future assistive robotic technologies.

The robot butlers (or doctors) we were all promised have not come to pass, yet, but researchers are still working steadily on increasing the capabilities of robotic systems. Eventually, assistive robotic technologies may become more mainstream. With our aging population, robots that can assist with daily living and medical care, such as nursing, will be very useful, and robotic prostheses are poised to provide unprecedented utility for amputees and those with other mobility issues.

However, if robots are to interact closely with humans it is important that they don’t cause injury or damage. A large part of this involves applying an appropriate amount of force to perform a

specific task. This latest technology aims to allow a robot to precisely gauge the force applied by or to a rubbery robotic finger.

The finger consists of an elastomer coating mounted on a ‘skeleton’ frame. In a hollow space within, the researchers mounted a fisheye camera lens and illuminated the space with a ring of colorful LEDs. When the finger is deformed by touching something, the colorful pattern inside changes. Cleverly, the researchers used a neural network that learned how to interpret the changing patterns and infer the force that is being applied with great sensitivity.

“We achieved this excellent sensing performance through the innovative mechanical design of the shell, the tailored imaging system inside, automatic data collection, and cutting-edge deep learning,” said Georg Martius, a researcher involved in the study. “Our unique hybrid structure of a soft shell enclosing a stiff skeleton ensures high sensitivity and robustness. Our camera can detect even the slightest deformations of the surface from one single image,” added Huanbo Sun, another researcher involved in the project.



Artificial neurons and synapses to mimic action

Researchers at Linköping University in Sweden have created artificial neurons and synapses using organic electrochemical transistors that can be printed onto plastic foil in their thousands. The printed structures can conduct both electrons and ions, helping them to mimic the action potentials generated in biological neurons. So far, the Swedish team integrated the artificial neurons into a living organism, in this case a carnivorous plant called a Venus flytrap, and showed that they could activate the closing mechanism of its leafy trap, even though an insect had not landed inside. The technology may prove very useful for a variety of medical applications, including better integration and control of robotic prostheses and implantable neuromodulatory technologies.

Electronics and biological systems are not usually a match made in heaven, at least in terms of direct contact and interaction. The cyborg revolution, in which humans seamlessly integrate electronic components into our bodies for super-human powers and evil antics, remains the realm of science fiction writers. However, this latest tech could pave the way for easier integration between machines and our nervous system, with a variety of potential uses in medical technologies.

The technology in question consists of



organic electrochemical circuits that can be printed on a plastic substrate. The structures can conduct both ions and electrons, and positive and negative charges, allowing them to mimic the action potentials generated by neurons.

"We've developed ion-based neurons, similar to our own, that can be connected to biological systems," said Chi-Yuan Yang, a researcher involved in the study. "Organic semiconductors have numerous advantages — they're biocompatible, biodegradable, soft and formable. They only require low voltage to operate, which is completely harmless to both plants and vertebrates."

"We chose the Venus flytrap so we could clearly show how we can steer the biological system with the artificial organic system and get them to communicate in the same language," said Simone Fabiano, another researcher involved in the study. The researchers can use the artificial neurons to stimulate the leaflet trap to close, despite there being no insects in sight.

The researchers hope that the technology could enhance medical devices where close communication between the device and the nervous system is required, such as in robotic prostheses or neuromodulatory devices.

Ultrathin films to maintain electrical conductivity, flexibility and strength

Researchers at UCLA created ultrathin films that are just 10 nanometers thick, but which can maintain electrical conductivity, flexibility, and strength. The molecules within the films are held together by non-bonding van der Waals forces, making them highly pliable, and the numerous sheets within the films are able to slide over each other without breaking apart. The films are also breathable and are permeable to water and air. These properties mean that the films are highly suited as a component for health-related wearables, and the resulting wearable creations can easily conform to the shape of the body part they are applied to.

Wearable tech is evolving apace. However, finding the right material for a bioelectronic film that can be applied directly to the skin can be challenging. Some materials are limited by poor flexibility and stretchability, and don't easily fit to the variable shapes and contours of our bodies. Other materials are not breathable, causing sweat to build up, and others cannot handle the presence of such biological fluids.

Creating a material that ticks all (or at least most) of the boxes for wearables is difficult. However, these researchers have achieved some success with this latest material, which consists of a patchwork of incredibly thin sheets made from molybdenum disulfide. The patchwork structure allows the sheets to slide over each other, allowing the material to flex easily and conform to the surface of the skin without breaking.

"Conceptually, the membrane is like a much-thinner version of kitchen cling film, with excellent semiconducting electronic functionality and unusual stretch ability that naturally adapts to soft biological tissues with highly conformal interfaces," said Xiangfeng Duan, one of the developers of the new material. "It could open up a diverse range of powerful sensing and signaling applications. For example, wearable health-monitoring devices built with this material can accurately track

electrophysiological signals at the organism level or down to the level of individual cells."

The researchers have conducted some preliminary proof-of-concept tests with the material to assess its potential as a major component in health wearables, and so far, the results have been promising. For instance, they created a wearable electrocardiogram system that involves small discs of the material being applied to the forearm.

"Our proof-of-concept demonstrations using the van der Waals thin film really just hint at the myriad possibilities for this new material," said Yu Huang, another researcher involved in the study. "The membrane could serve as the connection for human-machine interfaces, enhanced robotics and artificial intelligence-enabled technologies that connect directly. This could open a pathway to synthetic electronic-cellular hybrids – cyborg-like living organisms with electronic enhancements."

Optical probe for detecting the acidity of dental plaque

A team at the University of Washington have developed an optical probe that can detect the acidity of dental plaque. The acidity created by bacteria within plaque causes cavities, and knowing which areas of the teeth are particularly acidic could help dentists to predict where cavities are likely to arise. The knowledge could help someone change their oral hygiene practices, such as brushing more in high-risk areas. Moreover, the new device provides a quantitative measurement of overall oral health, which may give dentists and other clinicians an easy way to diagnose and track certain conditions.

Children learn at a young age that plaque on their teeth can cause cavities, also known as caries, and parents highlight the importance of regular brushing to remove that plaque. But plaque, which is essentially a bacterial biofilm, is not the full story, and all plaques are not created equal. The specific bacteria present in the plaque are predictive of how likely it is to cause a cavity, since the acid released by certain bacteria within these biofilms is responsible for the acid erosion that commonly causes cavities.

"Plaque has a lot of bacteria that produce acid when they interact with the sugar in our food," said Manuja Sharma, a researcher involved in the study. "This acid is what causes the corrosion of the tooth surface and eventually cavities. So, if we can capture information about the acidic activity, we can get an idea of how bacteria are growing in the dental biofilm, or plaque."

The new technology, which the researchers have called the O-pH system, relies on fluorescence to measure local acidity levels in and around the teeth. To begin with, a dentist would apply a tasteless, FDA-approved dye to the



mouth before a patient has had their teeth cleaned. Eric Seibel, another researcher involved in the study, said that "a dentist would rinse them with the tasteless fluorescent dye solution and then get their teeth optically scanned to look for high acid production areas where the enamel is getting demineralized."

The current iteration of the device is a prototype, and the researchers are still figuring out how it can be most useful to patients and dentists alike. One aspect involves education, where a dentist can show a patient in real-time which areas of their mouth are at high-risk, or if they are at an overall high-risk because of poor oral hygiene or a sugary diet.

"We do need more results to show how effective it is for diagnosis, but it can definitely help us understand some of your oral health quantitatively," said Sharma. "It can also help educate patients about the effects of sugar on the chemistry of plaque. We can show them, live, what happens, and that is an experience they'll remember and say, OK, fine, I need to cut down on sugar!"

Canadian researchers create engineered red blood cells as new Covid-19 vaccine technology



Researchers at McMaster University in Ontario, Canada created engineered red blood cells to act as a new COVID-19 vaccine technology. The cell membranes have been studded with the SARS-CoV-2 spike protein, and in experiments the researchers have conducted in mice the cells can trigger an immune response with

minimal side-effects. The team reports that the technique is relatively quick and easy to perform, and it could be useful in developing vaccines against a variety of viruses and future COVID-19 variants.

It appears that humans work most effectively under pressure and times of crisis can be a powerful catalyst for innovation and new technologies. This has been true during the COVID-19 pandemic, where vaccine development went into overdrive, and we saw effective

vaccines emerge at lightening speed, including several that capitalize on new technologies. This latest is also a relatively new approach, and the researchers behind it claim that it could pave the way for effective vaccines that have a reduced risk of side-effects.

"Current vaccine delivery methods often cause drastic immune system reactions and have short-lived responses," said Maikel Rheinstadter, one of the developers of the new technology. "Some of the vaccines that have been developed have shown side effects. This delivery platform opens new possibilities for vaccines and therapeutics. This platform makes our own blood cells smart in many different ways. In this case it's a vaccine. We are using our own cells much like nano robots inside of our bodies and whenever they see a disease, they can fight it."

The method relies on red blood cells which have been repurposed to present the SARS-CoV-2 spike protein to the immune system. "We take red blood cells and remove everything from the inside," said Isabella Passos-Gastaldo, another researcher involved in the study. "We then attach spike proteins to their outside to mimic a corona virus."

The Canadian team can attach a large dose of the protein to the cell surface, but report that they cause only minimal side-effects when tested in mice. They can also create the modified cells quickly and relatively easily, and can adapt them for other viruses or future variants of SARS-CoV-2.

"We have developed a method where we can trigger an immune response without the use of genetic material and yet we are able to synthesize these particles in a very short amount of time," said Sebastian Himbert, another researcher involved in the study.



Cleveland Clinic Abu Dhabi experts recommend regular colorectal screening for all over 40s

The UAE is already ahead of other countries in tackling the disease and has recommended that regular screening starts at the age of 40, following an increase in cases among younger people.

Physicians from Cleveland Clinic Abu Dhabi, a Mubadala Health partner, have renewed calls for women and men in their 40s to book a screening for colorectal cancer, so that it can be detected, diagnosed, and treated when the disease is in its earliest form.

According to the World Health Organization, colorectal cancer is the second most prevalent cancer in the UAE after breast cancer – it is the most common cancer in men, and third most common in women. Contributing factors to the disease include family history and lifestyle habits, such as eating too much meat and not enough fiber, obesity, smoking, and a lack of exercise.

The UAE is already ahead of other countries in tackling the disease and has recommended that regular screening starts at the age of 40, following an increase in cases among younger people.

Dr. Pascale Anglade, Staff Physician, Gastroenterology & Hepatology, Digestive Disease Institute at Cleveland Clinic Abu Dhabi, explained that the move by the UAE is one of the best preventative measures a country can adopt, saying: “Colorectal cancer is one of the most preventable and treatable forms of cancer - up to 90% of cases can be avoided with proper screening, which enables the warning signs to be spotted before the cancer even develops.”



“Early diagnosis is the name of the game, and whatever barriers we can remove to allow people to come and get screened, the more success we will have in treating this disease,” she added. “We have had multiple patients where a timely diagnosis has made a big difference in terms of life expectancy and the treatments that could be offered.”

Dr. Anglade has also been instrumental in encouraging more women to get screened by creating the 'For Women, By Women' service, which is managed by an all-female team to reduce the apprehension of attending a screening appointment.

“The 'For Women, By Women' all-female team of caregivers will assist female patients from the moment they register, through to endoscopy, the procedure room, and post-op recovery. It is a completely seamless experience and provides our female patients with comfort and peace of mind,” Dr. Anglade explained.

She concluded: “Everybody comes in anxious, but at Cleveland Clinic Abu Dhabi we have the right experts and support in place to ensure that patients have a comfortable and seamless experience from beginning to end.”

Technological advances mean that a colonoscope, a long, thin, flexible instrument with a light and camera, can be inserted into the body so that the physician can view the colon on a screen and clearly observe any abnormalities. The same-day procedure, which takes about 30 minutes, is carried out in the outpatient clinic and is painless. If the physician identifies a polyp, the colonoscope can immediately remove the growth, eliminating the need for an additional procedure.

Dr. Hosani joins WHO's PIP Framework as advisory group member

Abu Dhabi Public Health Centre (ADPHC) has announced that Dr. Farida Al Hosani, Infectious Disease Expert and Executive Director of Infectious Diseases and Official UAE Spokesperson for the Health Sector, has joined the World Health Organization's (WHO) Pandemic Influenza Preparedness Framework (PIP Framework) Advisory Group as a Member for the period 2022-2024.

Members of the Advisory Group are appointed by the Director-General of the World Health Organization and serve, in their personal, expert capacity, for three years.

The key goal of the framework is to improve and strengthen the sharing of information about influenza viruses with human pandemic potential and increase access to vaccines and other pandemic related supplies for developing countries.

Commending the recognition, Matar Saeed Rashed Al Nuaimi, Director-General of ADPHC, said, "This accomplishment celebrates a distinguished career and is a source of pride for us all, given the significant standing that the PIP Framework holds on an international level.

Dr. Farida Al Hosani has been an active participant across global, WHO level activities, and plays an integral role in the UAE's response to the global COVID-19 pandemic. She is a pioneering figure and adds to a long list of Emirati females engaged at an international level within their related fields."

He added, "This would not have been possible without the support of our wise leadership who have provided Emirati women with the tools and resources to succeed, while also emphasizing the efforts that H.H. Sheikhha Fatima bint Mubarak, Chairwoman of the General Women's Union, President of the Supreme Council for Motherhood and Childhood, and Supreme Chairwoman of the Family Development Foundation, has provided to Emirati women."

Dr. Al Hosani said, "I am honored to be joining the WHO's PIP Framework Advisory Group and contributing my expertise to addressing global



Dr. Farida Al Hosani

pandemics and advancing pandemic preparedness at a global level.

"As a proud Emirati female, I want to share my deep appreciation for our leadership and thank them for the support they have provided me in enhancing my skills and attaining the highest qualifications in public health and healthcare policy. I am looking forward to working closely with partners and experts from all over the world to support international healthcare efforts and build a healthy future for generations."

The PIP Framework is focused on sharing information around influenza viruses and promoting access to vaccines and other benefits. It was adopted in May 2011 by the 64th World Health Assembly, which comprises 18 members drawn from three Member States in each WHO Region.

The primary purpose of the Advisory Group is to monitor the implementation of the PIP Framework and provide evidence-based reporting, assessment and recommendations regarding its functioning to the WHO Director-General.

ECA welcomes new international startups to Anjal Z program

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The Abu Dhabi Early Childhood Authority (ECA) has said it welcomed seven global startups to Anjal Z Cohort 02.

Launched in partnership with the Abu Dhabi Investment Office (ADIO), Anjal Z aims to instil innovation in early childhood development by empowering growth-stage global startups as they launch their activities in Abu Dhabi and the region.

Anjal Z's inaugural cohort, which was completed in 2020, comprised global entrepreneurs and startups that were invited to localize their solutions for Abu Dhabi and

bring their products into a new market.

The seven growth-stage startups include FinlandWay, a school-in-a-box early education franchise network that utilizes technology to transform educator training and support curriculum delivery, learning processes, learning environments and outcome documentation; LuxAI, from Luxembourg, has built QTrobot, an easy-to-use humanoid robot that improves the effectiveness of autism interventions by increasing the attention and engagement of children with autism; and MonkiBox, a UAE-based startup that delivers science-backed toys and activities to empower parents to help their children master particular skills and meet developmental milestones.

Polish startup RemmedVR is a telemedicine platform for diagnostics and rehabilitation in neurology and eyecare. Their medically certified home vision therapy system consists of dedicated VR goggles, therapeutic exercises and a therapist control panel. Thinkerbell Labs have created the world's first digital braille literacy device based out of India that helps the visually impaired learn to read, write and type in braille through interactive audio-guided content in vernacular languages. WonderTree is an affordable physiotherapy and educational game provider from Pakistan that uses augmented reality to help children of determination improve their motor, cognitive and educational skills. DoBrain is a Korean-based AI-based application that offers an accessible and affordable digital cognitive learning program for young children.



Hasan Jasem

Mubadala Health partners with BioIntelliSense to revolutionize patient care with new technological solutions

across our integrated network. BioIntelliSense's technology will allow our clinicians to access near real-time information on patients' vital signs and symptoms, enabling them to identify changes in health sooner and intervene earlier."

"This strategic partnership will help create fully integrated, continuous care delivery that starts during a patient's hospitalization, enabling monitoring of their health status throughout their recovery process, and from the comfort of their own home after leaving the hospital," Al Nowais added.

"The collaboration with Mubadala Health in launching a continuous remote monitoring capability will help providers deliver a new level of care for patients in the UAE," said James Mault, MD, Founder and Chief Executive Officer of BioIntelliSense. "This partnership with Mubadala Health represents a tremendous opportunity to apply the BioSticker™ and BioButton® wearable medical devices across multiple care settings, make early detection simple, and empower care teams with personalized clinical intelligence that enables informed, proactive interventions."

Mubadala Health will roll out the new technology across its integrated healthcare network of providers.

Starting with long-term services, Mubadala Health is also working to incorporate BioIntelliSense's technology for similar remote monitoring programs across orthopedics, oncology, end-stage renal disease, post-hospital discharge, home healthcare, and elderly primary care.

The adoption of BioIntelliSense's flagship FDA-cleared BioSticker and medical-grade BioButton wearable devices, along with its algorithmic-based data services, will enable Mubadala Health to capture continuous multi-parameter patient trending data passively and securely across a broad range of physiological leading indicators (resting heart rate, respiratory rate, temperature, body position, activity level, sleep, gait analysis, et al.). Together with BioCloud™ analytics and intelligent alerting, Mubadala Health can remotely monitor at-risk, long-term care patient populations and allocate resources efficiently based on a documented clinical need through a centralized command center using the data from the BioIntelliSense multi-parameter wearable devices.

MBRU, Monaco's Princess Grace Hospital to strengthen collaboration in medical research & education

Mohammed Bin Rashid University of Medicine and Health Sciences (MBRU) has signed a Memorandum of Understanding (MoU) with Princess Grace Hospital (CHPG), Monaco's only public hospital, to strengthen collaboration in medical research and education.

The agreement was signed by Professor Zaid Baqain, Provost at MBRU, and Benoîte Rousseau de Sevelinges, Director of CHPG, at a special event at the Monaco pavilion – Expo 2020 Dubai.

The MoU aims to promote student exchange to training activities and create a constructive environment that encourages joint faculty collaboration in teaching and research.

The agreement reflects a desire to achieve shared objectives, including enhancing cooperation in areas of mutual interest such as organizing symposia, conferences, and workshops, as well as exchanging information and ideas and providing consultations in different academic fields.

Professor Baqain said, "Working with healthcare organizations such as CHPG allows us to improve healthcare output and research and develop a strong foundation for important bilateral concepts, innovation, and economic growth for both ecosystems. The collaboration will help our faculty and learners develop a deeper understanding of healthcare systems worldwide, study global views and



enrich experiences."

Sevelinges asserted that CHPG is ready to welcome medical students from MBRU. "It is an honor to collaborate in academic areas with MBRU. CHPG is deeply committed to cooperating with foreign organizations to share experiences and improve the healthcare system."

Summertown Interiors supports UAE's healthcare system with new projects



Summertown Interiors, the UAE's leading fit-out contractor specializing in sustainable interiors, has recently delivered a number of healthcare projects for world-leading providers in support of the region's transformation of its healthcare system.

As part of the UAE's Vision 20401, the government is committed to advancing the region's healthcare sector with a goal to create a world-class healthcare system, fit for the next 50 years. Today the sector is shifting from curative to preventive care and is increasing investments towards digital and technological infrastructure.

In line with the National Strategy for Wellbeing 2031, a key objective is to develop infrastructure that improves the quality of life for residents. There is increasing recognition that smart, well-designed environments help promote patient wellbeing and allow healthcare providers to operate more efficiently.

Summertown's latest projects include the new American Hospital and its StayWell pharmacy located in recently opened Dubai Hills Mall, Abu Dhabi's Priory Wellbeing Centre and Mediclinic's Sports Medicine & Rehab Centre, located in Mediclinic Parkview Hospital, Dubai. All projects reflect the shift in healthcare design whereby old facilities are being refurbished and new facilities are being built with a common theme of wellness – spaces that go beyond delivering treatment but instead empower recovery with a welcoming and therapeutic feel.

Leading healthcare provider, American Hospital Dubai appointed Summertown to deliver its latest clinic in Dubai Hills Mall, as part of its strategy to provide dedicated clinics closer to the communities they serve. The fit-out scope encompassed consulting, treatment, and pediatric rooms, as well as a laser treatment room, nurses' station, reception and cashier area, and other utility rooms.

Summertown also completed the fit-out of StayWell Pharmacy, the retail pharmacy brand which aims to inspire healthier communities and is conveniently located opposite the clinic in the Dubai Hills Mall. The pharmacy features flowing curved bespoke joinery and bamboo design elements to provide a relaxed, calming ambiance, accustomed to fit in with the overall design aesthetic of the mall.

Another healthcare provider to open in a community-driven residential area is Abu Dhabi's Priory Wellbeing Center—a facility that provides psychiatric and

psychological mental health, neuro-developmental and behavioral assessments and treatment to adults and children. For the latest project from leading UK provider Priory Group, Summertown transformed the 1,024sqm villa located in Al Bateen, Abu Dhabi into a warm and welcoming wellness center focused on harnessing the fulfilment of its patients.

In collaboration with designers LXA and project managers PMK Consult, Priory's new wellbeing center embodies a calming atmosphere through a subtle color palette, natural timber finishing for warmth and opaque glazing on glass that allows diffused lighting to enter the space without compromising desired privacy. Acoustically treated seating nooks enhance the common area to enable a quiet, calming and private waiting experience. Other design elements include wall print designs, minimalist interior, and contemporary space planning, which encourage a cultivating culture for guests and staff.

Summertown Interiors also delivered a new private-sector project recently in Dubai's Mediclinic Parkview Hospital — part of the hospital group which operates in seven hospitals and over 20 clinics in the UAE. Summertown undertook the full interior fit-out of the 1,107 sqm fourth floor of the state-of-the-art multi-disciplinary hospital. A first of its kind integrated facility for the treatment of sports injuries, sports performance, musculoskeletal complaints, & rehabilitation therapy, the refurbishment included efficient planning of the space to bring to life a revolutionary offering for Dubai that provides a blended balance of hospital-level services and comprehensive rehabilitation training.

Marcos Bish, CEO of Summertown Interiors comments: "Our recent healthcare projects are positive examples of how healthcare facilities in the region are transforming from traditional clinical environments into welcoming and therapeutic spaces that go beyond delivering treatment to empower patient recovery. It's great to see the increase in investment to improve the region's healthcare system, and we're delighted to be able to assist our world-class healthcare clients in the delivery of these diverse projects."

Summertown Interiors is supporting further healthcare institutions to transform their facilities to improve wellbeing. With its expertise in sustainable interior solutions, Summertown can help healthcare companies achieve their goals by helping bring to life their designs and adopting smart solutions and sustainable construction techniques to maximize the long-term value of their facilities.



**Laila Abdel
Wareth, MDa**
Urology



**Laila Abdel
Wareth, MDa**
Institute Chair, Clinical
Pathology, Pathology &
Laboratory Medicine Institute
Cleveland Clinic Abu Dhabi

Dr. Laila Abdel Wareth, MD, is the Chief of Clinical Pathology at the Pathology and Laboratory Medicine Institute at Cleveland Clinic Abu Dhabi.

Prior to joining Cleveland Clinic Abu Dhabi, Dr. Abdel Wareth served as Chief Medical Officer of SEHA Pathology and Laboratory Medicine Services and Chair of Pathology and Laboratory Medicine Institute at Sheikh Khalifa Medical City.

She brings more than twenty-five years of experience in healthcare, also including roles at British Columbia Children's & Women's Hospital in Vancouver, Canada and Mafraq Hospital, Abu Dhabi, UAE.

Dr. Abdel Wareth earned her medical degree from Ain Shams University Cairo, Egypt and completed her postgraduate training at the University of British Columbia, Canada, in the specialty of Medical Biochemistry and Clinical Pathology.

She obtained Canadian and American Boards accreditation in Medical Biochemistry and Clinical Pathology and is a fellow of the Royal College of Physicians and Surgeons in Canada, the College of American Pathologists, as well as the Royal College of Pathologists in the UK. In addition to her clinical

degrees, Dr. Abdel Wareth has an Executive Masters Degree in Healthcare Administration from Zayed University, UAE.

She is an active member in various scientific societies and has several publications to her credit in the field of Laboratory Medicine.



**Mohammed
Abdallah, MBBS**
Associate Staff Physician,
General Surgery, Digestive
Disease Institute
Cleveland Clinic Abu Dhabi

Dr. Mohammed Abdallah, MBBS, is an Associate Staff Physician in the Digestive Disease Institute at Cleveland Clinic Abu Dhabi.

Prior to joining Cleveland Clinic Abu Dhabi, Dr. Abdallah worked at a private hospital in the United Arab Emirates. Dr. Abdallah received his medical degree from Jordan University of Science and Technology, Jordan.

He completed his residency at the American University of Beirut and fellowship in Surgical Oncology at King Hussein Cancer Center, Jordan. During his fellowship, he provided patient care in surgical oncology.

Dr. Abdallah resides in Abu Dhabi with his wife and two kids. He enjoys sports and traveling.



Ladival



**CARING
IS
PROTECTING**



NVIDIA unveils Clara Holoscan MGX tool

Silicon Valley giant NVIDIA is expanding its arsenal of products for healthcare with the launch of Clara Holoscan MGX, a tool designed to help medical device organizations develop artificial intelligence tools. The company said the new technology was created to help industry players meet regulatory standards.

"Deploying real-time AI in healthcare and life sciences is critical to enable the next frontiers in surgery, diagnostics and drug discovery," said Kimberly Powell, vice president of healthcare at NVIDIA.

"Clara Holoscan MGX, with its unique combination of AI, accelerated computing and advanced visualization, accelerates the productization of AI and provides software-as-a-service business models for the medical device industry."

The platform builds on its previously launched product, the Clara Holoscan,

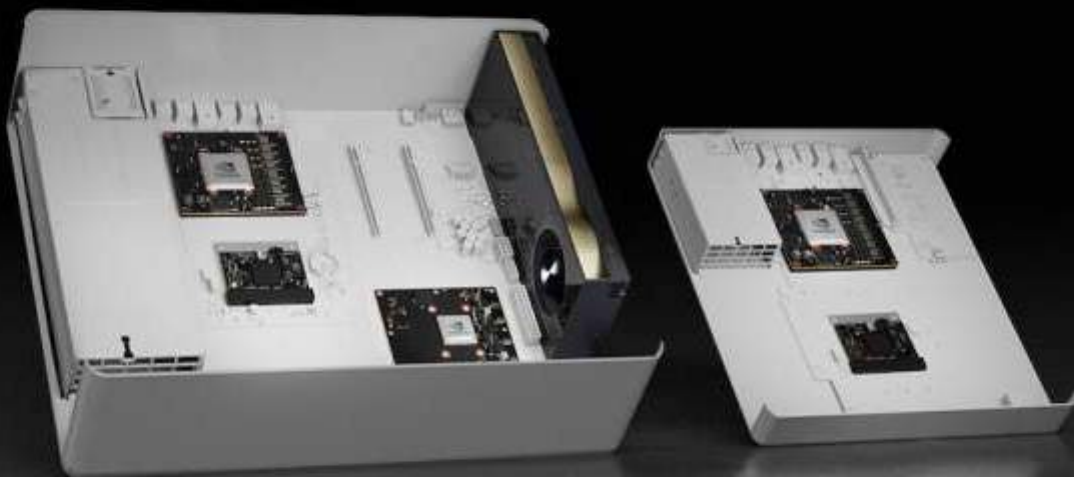
which developed to give industry stakeholders a computational infrastructure to stream data from medical devices. The company said that Clara Holoscan MGX can process "high-throughput data streams for real-time insights."

Medical devices are becoming increasingly connected and AI-backed. NVIDIA is pitching this new tool as a way to help cut down on time to market for "software-defined medical devices."

The new tool can be used in a variety of ways, including medical device development through commercialization, according to NVIDIA's web page.

NVIDIA has a number of initiatives in the healthcare space. In 2021 the company announced that it had teamed up with pharma company AstraZeneca and the University of Florida on an AI for drug discovery and patient care initiative. NVIDIA has also joined forces with Harvard University on an AI-based tool kit to help researchers gain access and insights about DNA.

During the COVID-19 pandemic the company released an automated speech recognition and natural language processing technology that can transcribe and organize information from a telemedicine visit for patients and clinicians.



The new tool can be used in a variety of ways, including medical device development through commercialization, according to NVIDIA's web page.

Arab Health Dubai

24-27 January 2022



UPCOMING EVENTS



**Pharmaceuticals &
Pharmacy Networking
Conferences**

29-30 April
Dubai



**3rd World Congress
on Diabetes &
Endocrinology**

09-10 May
Dubai



**8th Abu Dhabi
Int'l Conference in
Dermatology and
Aesthetics
(AIDA 2022)**

20-22 May
Abu Dhabi, UAE



**Middle East
Obstetrics &
Gynecology
Conference 2022**

26-29 May
Dubai



**International
Conference on
VisionScience and
Eye 2022**

07-08 June
Dubai



**Middle East
Healthcare Financing
Summit**

14-15 June
Abu Dhabi



**International
Summit on Neurology
and Brain Disorders**

16-18 June
Abh Dhabi



**Annual Summit
on Case Reports and
Emergency Medicine**

17-18 June
Abh Dhabi





Not all Round Breast Implants are the Same

PROVEN

Performance

MENTOR® MemoryGel® Breast Implant 10 Year Core Study data demonstrates safety, efficacy, and high patient satisfaction.

Design

Each profile in the MENTOR® MemoryGel® and MemoryGel® Xtra Breast Implant family contains proprietary and dynamic fill ratios developed from surgeon feedback.

Peace of Mind

As one of the world's leading maker of high quality breast implants for over 30 years, our experience results in quality products that you can rely on and are backed by a comprehensive warranty.



#1 GLOBAL BRAND³

USED OVER 115+ COUNTRIES

7 MILLION+ women have MENTOR® Silicone Gel Breast Implants⁵

Successfully used and trusted for more than

30 YEARS⁶

Proven Performance

Mentor® MemoryGel® Breast Implants in Primary Augmentation Patients
What does The Mentor® Level 2 Core Study Say at 10 years?

97%
Satisfied
WOMEN⁴

1%
Rotation
RATE⁴

0%
Double
CAPSULES⁴

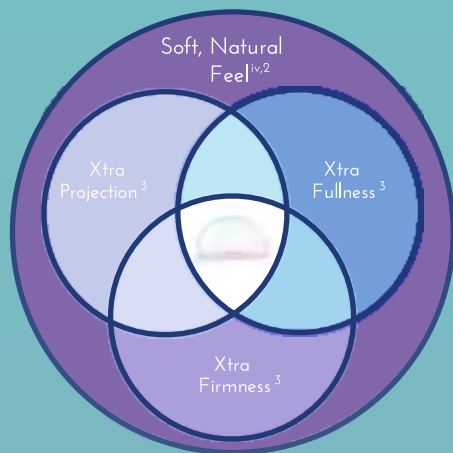
1.3%
Wrinkling
RATE⁴

LOW
Capsular
CONTRACTURE
RATE⁴

⁴⁴ Based on patient survey at 10 years in the Mentor® MemoryGel™ Breast Implant 10-Year Core Gel Clinical Study Final Report.

¹ Head-to-head testing according to industry standard ASTM D412 test method for rubber properties in tension (v. 0901) between MemoryGel® (n=19) and Natrelle Inspira (n=19)

Why MemoryGel™ Xtra Breast Implants?¹



iv. Mentor Consumer Preference Market Research Report July 2017.

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