

DailyDose

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The official daily newspaper of the Arab Health Exhibition

Back to Business with Arab Health and Medlab Middle East

By Daily Dose Staff

Healthcare and trade professionals representing more than 150 countries will arrive in Dubai today for the opening of Arab Health and Medlab Middle East, the largest exhibitions for the healthcare and laboratory industries in the MENA region.

Under the show theme of 'United by business, driving the industry forward, the co-located events will reinvigorate the healthcare sector following the challenges of the pandemic by building on the AED3.7 billion worth of business deals done at the 2020 edition of the show, a year-on-year increase of 3.7 per cent.

Wouter Molman, Executive Vice President for Informa Markets, said: "Arab Health and Medlab Middle East have been instrumental in supporting the UAE's ambitions to become a healthcare hub for trade and business. The opportunity to host a physical event is testament to the UAE Government's vaccination strategy, while also underscoring the appetite of those from the healthcare industry to come together to network, discuss the industry's future, and do business."

More than 20,000 healthcare, laboratory and trade professionals are expected to attend the Arab Health and Medlab Middle East live, in-person events, with many more joining online. Both shows this year have incorporated a hybrid event format with a two-month online event campaign that has provided AI matchmaking and industry-specific content to thousands of international participants, all while supporting visitors locally to schedule face-to-face meetings at the live, in-person shows.

Arab Health, now in its 46th year, is expected to host over 1,500 exhibitors from 62 countries and 20 dedicated country pavilions, including Germany, South Korea, France, the U.S. and Italy. Throughout the show, innovation and technology will be a key theme, with leaders in the field, including Canon and Philips showcasing their latest product launches. The Arab Health start-up zone returns this year and will feature 13 local and international companies and a further eight healthcare start-ups will be on show courtesy of the Italian Trade Agency.

As part of the Arab Health Congress, more than 300 regional and international speakers



and 3,000 delegates will participate in nine Continuing Medical Education (CME) and three non-accredited conferences. The focus will be on healthcare innovation, including Pharma and Drug Discovery, AI in Healthcare and Digital Health and Innovation.

Taking place concurrently this year is the co-located Medlab Middle East. The event will spotlight the latest innovations from over 250 exhibitors at the cutting-edge of the laboratory sector under the central show theme of 'Reshaping the future of diagnostics'.

A specific focus for the 20th edition of the show will be strategic plans for the medical laboratory in 2022 and beyond. Themes include scientific advancements, new technologies, continuous review of quality standards and international regulations.

Supporting healthcare advancements in the region, the Medlab Middle East Congress is set to provide the necessary education and solutions to advance laboratory skills and improve laboratory functions to over 3,500 conference delegates.

With a total of eight conferences, Medlab

Middle East Congress is the largest CME accredited multi-track medical laboratory congress in the world, featuring over 80 renowned laboratory champions from around the world. This year's conference programme includes a dedicated focus on COVID-19, addressing the latest scientific findings on the virus and discussing its impact on health in the region.

"The past 18 months have been difficult for everyone from both a personal and business perspective; however, the healthcare industry has worked tirelessly to overcome these challenges, and we are thankful to everyone who has contributed to steering us out of the pandemic. We now look to the future with renewed optimism thanks to the advances that have been made within the sector," added Molman.

The events will feature keynote speeches and scientific lectures, industry briefings, product demonstrations and networking opportunities, as well as a series of pre-arranged one-to-one meetings, with an emphasis on creating lasting relationships.

In the month after the live event, the online

platform will remain available for all participants to continue to make connections and secure deals.

Spotlight on the medical device market

Research specialists Fitch Solutions, the content partners of Arab Health 2021, have estimated that the UAE's medical device market will reach AED5.6 billion by 2025, with an annual compound growth rate (CAGR) of 4.4 per cent from 2020-2025.

According to the Q2 2021 Fitch Solutions United Arab Emirates Medical Device report, the market will benefit from an overall strong economic performance over the next five years. Key market drivers, including population growth, changing epidemiology, a growing medical tourism industry, healthcare infrastructure developments, expanding health insurance, digital transformation, and new technologies, will underpin growth.

The medical device market includes any product used in healthcare for the diagnosis, prevention, monitoring or treatment of illness or handicap, other than drugs such as consumables, diagnostic imaging, dental products, orthopaedic and prosthetic products, and patient aids.

Ross Williams, Exhibition Director at Arab Health, said: "Arab Health has for the last 45 years been instrumental in the growth of the medical device sector by providing a platform to connect and do business with the global healthcare industry."

"In line with the UAE's increasing budget allocation for the healthcare sector and ongoing healthcare development projects, we expect to play a pivotal role in the continued growth."

"This will be supported by a strong economic recovery post-2021, Dubai's hosting of the World Expo which will have an encouraging impact of the healthcare sector, as well as urban expansion and the UAE retirements visa."

As part of the Arab Health 2021 live event, the exciting healthcare start-up competition, Innov8 Talks, returns. A stand will be dedicated to showcasing 32 start-ups and their pitches, each dedicated to improving healthcare with the latest unique and innovative solutions in prevention, management, operations and diagnostics, amongst others.



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DHA and its strategic partners to highlight experience of combating COVID-19 at Arab Health 2021

DHA will also display its latest services especially in the field of healthcare technology.

Article provided by Dubai Health Authority (DHA)

The DHA is participating at this year's edition of Arab Health along with a group of its strategic partners, namely: The Control and Control Center, Mohammed bin Rashid University of Medicine and Health Sciences, Emirates Airline, Noor Dubai Foundation and Al Jalila Children's Hospital.

DHA's participation in this edition aims to shed light on the efforts that Dubai has made and is continuing to make in order to overcome the global challenge imposed by COVID-19.

DHA will also provide an overview to exhibition goers of Dubai's exemplary experience and its successful methods in combatting the COVID-19 pandemic and bypassing the peak period of the pandemic as well as the rapid steps the Emirate took towards recovery.

The authority will also highlight a set of innovations and smart solutions, which it aims to implement in line with its vision to prioritise the use of technology across all aspects of healthcare from health management to patient-centric tools such as telemedicine.

Commenting on the authority's participation

in this major international exhibition, His Excellency Awadh Al Ketbi, Director-General of the Dubai Health Authority, highlighted Dubai's enormous capabilities that makes it the leading platform in organising and hosting international summits, events, and conferences.

He also highlighted that Dubai's success in organising the Arab Health Exhibition this year given the circumstances the world is going through, shows the strength of the UAE and Dubai. It also highlights Dubai's capabilities in providing a healthy and safe environment for all.

His Excellency Al Ketbi said that this exhibition represents an important opportunity for all participants to exchange knowledge and experience as well as to highlight the latest advances in the medical field at a local, regional and global level.

He added that the congress provides an opportunity for Dubai Health Authority and all those taking part in this congress to build new partnerships and discuss collaborative opportunities.

His Excellency pointed out that what



distinguishes the authority's participation in this year's exhibition is the presence of strategic partners with it on one platform, and they constitute, with their presence, an important additional force for the health sector in Dubai, stressing that DHA deeply values these partnerships, which aim to fulfil the vision of further strengthening Dubai's health sector.

Dubai Healthcare City to champion research and innovation excellence across its ecosystem at Arab Health 2021

Article provided by Dubai Healthcare City



Following one of the most challenging years ever for the healthcare industry, Arab Health 2021 is a great opportunity to reconnect in-person with our partners and explore new opportunities in a sector that is transforming at a rapid rate.

The challenges posed by COVID-19 have conversely triggered opportunities and accelerated digital transformation, adoption of new technologies and greater collaboration. The pandemic has also pushed the need for more efficient research and development further up health agendas across the MENA region and beyond.

The UAE Centennial 2071 plan, the bold vision of our country's future-focused leadership, places great focus on innovation and education to advance science and technology and improve health sciences. Additionally, our country is driving towards the next 50 years on a path to being incubators of entrepreneurship and an international centre of research.

Dubai Healthcare City, a free zone that brings together core healthcare services with best-in-class global and regional names, is fully aligned with the national agenda; research and development are cornerstones of our ecosystem. It is for this reason that we have selected the theme 'Research and

Innovation', for our participation at Arab Health 2021, during which we will highlight the inspirational behind-the-scenes research efforts and innovative initiatives of our partners across our community to provide quality healthcare in the country.

In collaboration with our long-standing partners, we have completed 70 research projects during the past two years, and currently there are more than 75 active research studies in operation, ranging from COVID-19, cancer, diabetes, autism, gastroenterology, depression, kidney disorders, and a number of paediatric conditions. Furthermore, we have implemented three Phase III Clinical Trials and two, Phase II Clinical Trials, important work that will shed new light on treatments for a number of conditions.

Throughout the four days, we will showcase some of the ground-breaking research and development of our stakeholders, such as the Al Jalila Children's Specialty Hospital's Genome Lab – the first of its kind in the region. Furthermore, we will be bringing together some of the brightest minds in healthcare, leading scientists and researchers, for a thought-leader series, that will provide attendees with invaluable insights into the future of healthcare.

We also have the honour of hosting several of our partners, some of the biggest names in global healthcare, including Al Jalila Children's Specialty Hospital (AJCH), Al Jalila Foundation (AJF), Mohammed Bin Rashid University of Medicine and Health Sciences (MBRU), Clemenceau Medical Center (CMC), AstraZeneca, Mediclinic and Moorfields Eye Hospital among others at our stand, with experts on hand to share their latest developments. This truly is a platform for knowledge transfer, sharing of expertise and demonstrating how, through research and development, DHCC can play a key role in helping realise Dubai's Urban 2040 plan and fostering healthier lifestyles.

In line with the vision of Dubai's leadership, we are committed to creating a holistic destination of excellence in healthcare and wellness for local, regional and international patients. Together with our partners across clinical and non-clinical operations, DHCC's strategic set-up provides ample benefit to patients, medical travellers, students, investors, and visitors and we continue to work towards delivering accessible quality healthcare. We are looking forward to bringing all these services and expertise under one roof at Arab Health.

We look forward to welcoming you at Stand A30 (Hall 6) at Dubai World Trade Centre (DWTC) from 21 – 24 June.

Furthermore, demonstrating our commitment to research and improving delivery of quality healthcare, we are offering those at Arab Health the chance to win a free Genomics Screening for certain illnesses.

Today at a glance

Arab Health 2020 Congress

Conference	Room	Location	Start	Finish
Total Radiology	Sheikh Maktoum Hall	Dubai World Trade Centre	09:15	17:10
Public Health	Abu Dhabi B	Dubai World Trade Centre	09:30	16:45
Pharma and Drug Discovery	Al Ain J & K	Dubai World Trade Centre	09:40	17:30
Physical Medicine and Rehabilitation	Dubai D	Dubai World Trade Centre	08:30	17:30
Obs & Gyn	Grand Ballroom, Level 4	Conrad Dubai	08:20	17:00
Surgery	The Ballroom, Level 4	Conrad Dubai	08:45	18:00

Medlab Middle East 2021 Congress

Conference	Room	Location	Start	Finish
Laboratory Management	Dubai Room	Za'abeel Hall 6, Dubai World Trade Centre	09:45	18:00
Haematology	Bangkok Room	Za'abeel Hall 1, Dubai World Trade Centre	09:45	16:30



Arab Health Daily Dose

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Meet with Expert – Welcome to the new age of ultrasound

Arab Health, Al Ain F - Meeting Room, Workshop hosted by Canon

13:30 - 14:30

Together ahead to new horizons in OB Ultrasound with Artificial Intelligence, Dr. Adil Al-Qaysi, Danat Al Emarat Hospital for Women and Children

Canon Medical continues to deliver smart, AI-powered medical imaging solutions. This workshop will take you through the latest application of AI in ultrasound and how AI can bring clinical and workflow innovations. You will experience a fabulous live hands-on session to the AI assisted Fetal Biometry.

14:30 - 15:30

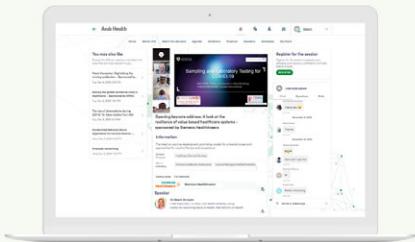
The Sono way for SHOULDER tendons, Prof. Ayman M Fahim, Consultant Medical Center

This session will be led by a pioneer in Musculoskeletal Ultrasound with over 10 years of experience. There is a strong clinical focus to learn from the expert in the Dynamic Shoulder Imaging. Transducer options with 10 MHz to 33 MHz provide crystal clear imaging from deep into the near field. You will experience Shoulder Scanning Protocols, Rotator Cuff Assessment, Shoulder Impingement and Shoulder Instability. Many case examples will be presented, and discussion is encouraged to share ideas and experiences.

Arab Health and Medlab Middle East Online

Until July 22, from the comfort of your home or office, access free thought leadership content and 190+ educational sessions to choose from with 450+ global speakers. The Online events bring together policy drivers, thought leaders, healthcare professionals and decision-makers in order to address healthcare's most pressing challenges through collaboration and empowerment. Use the platform to preschedule qualified meetings in advance to make the most of your live event experience. For those who cannot attend the event in-person, the Online platform will help you reach a wider audience to connect, network and trade. It will also give you an opportunity to explore innovative products and get in touch with companies through the in-platform chat.

Register here: [Arab Health Focus Day](#)
[Medlab Middle East Focus Day](#)



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Roux En Y Gastric bypass

More than 50 years in the treatment of morbid obesity

By Mohammed Al Hadad, MD, FACS, Head of General and Bariatric Surgery Healthpoint Hospital, Mubadala Healthcare, Abu Dhabi, UAE



Obesity is the first pandemic of the 21st century and the most serious chronic non-communicable disease facing mankind according to the World Health Organization (WHO). According to the World Obesity Federation, obesity is defined as a chronic progressive relapsing life-threatening complex neurohormonal disease. The American Medical Association defines obesity as a medical condition in which excess body fat accumulates to the extent that it may have an adverse effect on health, leading to reduced life expectancy and/or increased health problems.

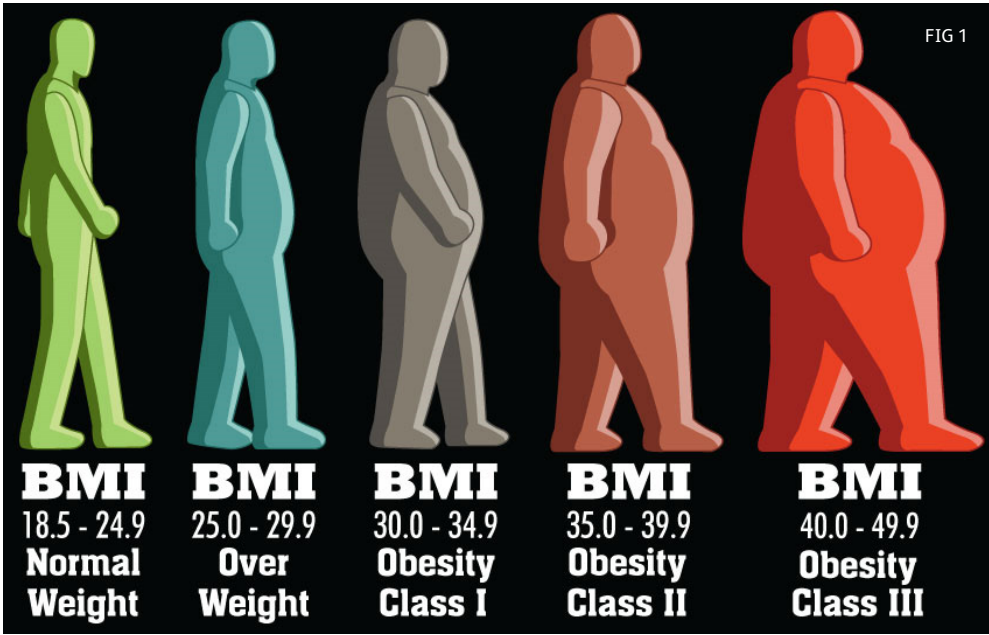
In adults, it is defined by body mass index (BMI) of 30 or greater. In children and adolescents, it is defined by a BMI for age at or above the 95th percentile of a specified reference population. BMI is calculated by dividing the weight in Kg by the squared height in meters. Figure 1 shows normal and abnormal BMI and classification of obesity.

Bariatric surgery is the only durable treatment for morbid obesity and its related diseases. Over the last 50 years, many surgical operations did not survive because of the safety, durability, morbidity, and mortality. Laparoscopic Roux en Y gastric bypass (LRYGB) is one of the few surgical operations that survived for more than 50 years since its discovery by the late Dr. E Maisson in 1967. It is being used as a benchmark of all bariatric surgical operations.

In this operation, a small less than 50 ml pouch "gastric pouch" is created from the stomach and separated completely from the rest of the stomach. The small intestine "jejunum" is transected around 50 -100 cm from the ligament of trietz (junction between duodenum and jejunum) to create the biliary limb and then a 100 cm from the transection to create the Roux limb. Two anastomoses are created between the jejunum and the gastric pouch called gastro-jejunal anastomosis, and another one to connect the intestine together to create the jejuno-jejunal anastomosis, as shown in figure 2.

The mechanism that RYGB helps the patient to lose weight and put their obesity-related diseases in remission is a complex neurohormonal one. Changing the gastrointestinal signal; to the brain, pancreas, liver through endocrine, neuronal and hormonal changes. Hormonal changes like decrease Ghrelin, decrease insulin resistance, increase in Glucagon-like peptide 1 and polypeptide YY are among many hormonal changes that have been seen after RYGB.

The minimally invasive approach "being able to do this operation laparoscopically" first done by Dr Alan Wittgrove in 1993, has changed the scope of



this operation as it reduced morbidity and mortality and made it more widely used across the world.

LRYGB has been studied extensively over the past 50 years. Many studies have proven the superiority of this operation to many other surgical options. It is currently being considered the "STANDARD" surgical operation to treat morbid obesity. Any new surgical operation has to match the safety profile and provide better results to gain popularity.

Type 2 diabetes mellitus (T2DM) is one of the most important obesity-related diseases. RYGB has proven its efficacy in treating it. Many international medical associations recommend considering bariatric surgery in treating T2DM patients

specially when it is not optimally controlled.

The long-term effect of RYGB on T2DM has been well established. Ted D Adams, and his colleagues published a study in the New England Journal of medicine in 2017, in which he showed that 51 per cent of patients with T2DM who had RYGB were on no medications 12 years after the surgery.

Two recent randomized controlled trials from Sweden "SM-BOSS" and Finland "SLEEVEPASS" trials by R Peterli and B Wolnerhanssen et al, showed that, five years after the surgery, RYGB was superior to sleeve gastrectomy in weight loss, dyslipidemia and hypertension remission. Dr. P. Schauer's study also showed superiority of RYGB

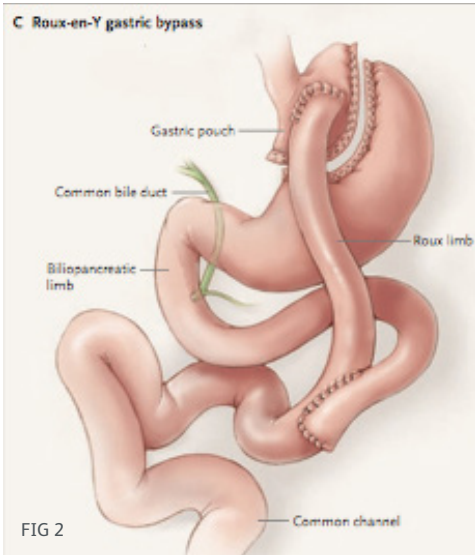
over sleeve gastrectomy in treating T2DM in the famous STAMPED trials five years after the surgery.

Bariatric surgery and RYGB in specific has been proven to reduce the predicted 10-years and lifetime cardiovascular disease risk through decreasing BMI, blood lipids in males and females, according to the study that was published in the surgery for obesity and related magazine journal (SOARD) in April 2020 on more than 1170 patients by Amanda S Hinerman and colleagues.

The durability of weight loss after RYGB has been studied, and a recent study by L Angrisani on 105 patients showed that 15 years after the surgery, patients mean excess body weight loss is more than 50 per cent. In addition, 50 per cent of T2DM patients, 61 per cent of hypertensive patients and 58 per cent of dyslipidemic patients were in remission also.

The safety of bariatric surgery, in general, has been improving over the last 20 years, as shown in figure 3. RYGB safety profile has been evaluated by Kumar and his colleagues in 2018 published in SOARD, which showed 1.6 per cent morbidity and 0.2 mortality in more the 41,000 patients who had RYGB.

LRYGB has proven to be an effective and safe option to treat obesity, T2DM and many other obesity-related diseases over the last 53 years. It is a technically demanding operation that requires good compliance from patients with vitamins and lifestyle like most bariatric operations. Advances in surgical knowledge, training, and techniques make the surgery easier and safer with time.



Morbid obesity is a chronic relapsing disease, and it requires life-long follow-up and commitment from patients and healthcare providers to control the disease and prevent relapse.

References available on request



Dr Hadad will be speaking at the session 'Update – the latest evidence on gastric bypass' at 11:15 at the Surgery Conference in Conrad Dubai at Arab Health.

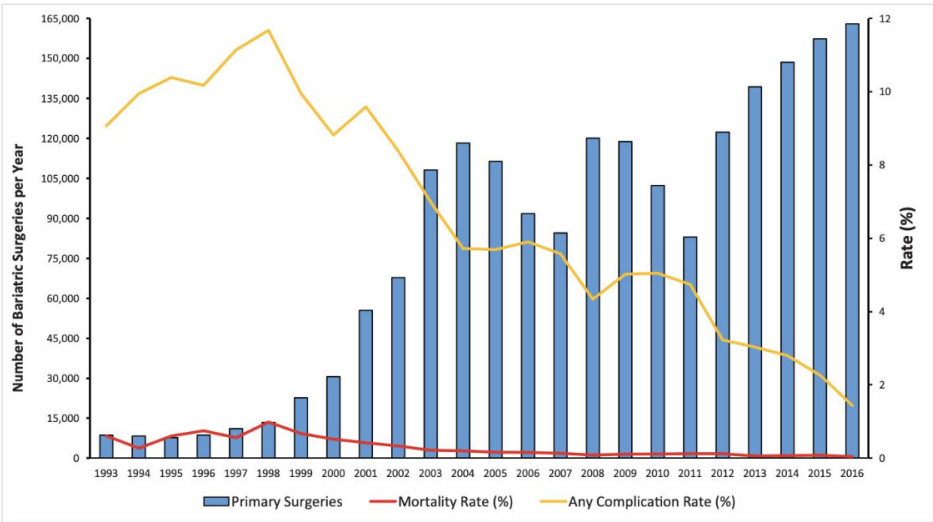
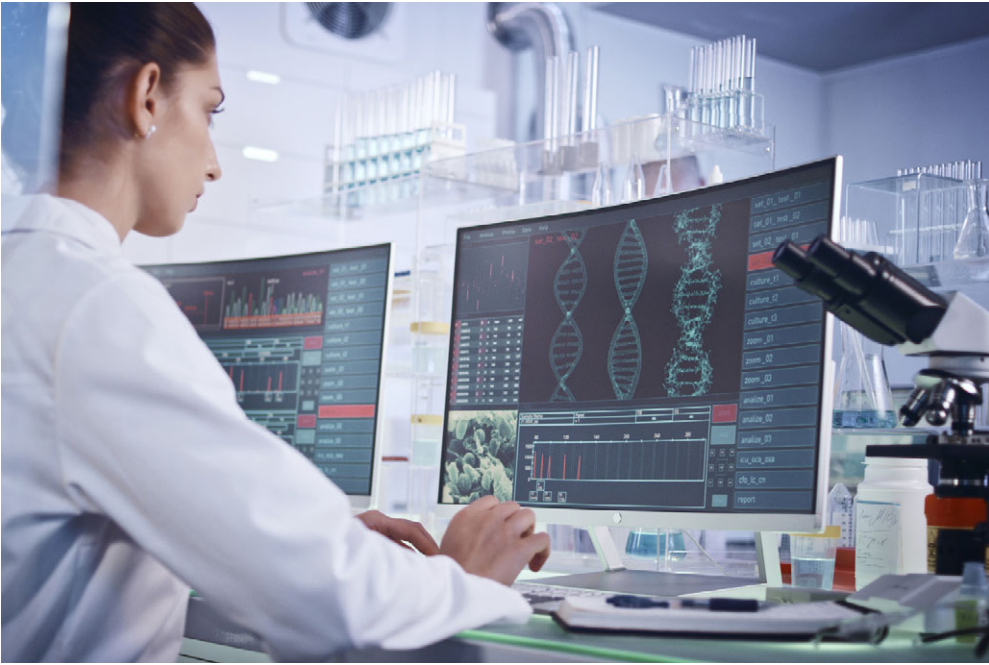


FIG 3 Number of inpatient primary bariatric surgery procedures and initial admission complication and mortality rates in the United States from 1993 to 2016.

Creating personalised prevention and treatment plans

Article provided by Mediclinic Middle East



Mediclinic Precise is part of Mediclinic International, one of the world’s leading private healthcare companies with operations in Southern Africa, the United Arab Emirates and Switzerland.

At Mediclinic Middle East, we are using state-of-the-art technology as part of our Mediclinic Precise programme to transform healthcare delivery in the region, by interpreting genetic information to create personalised prevention and treatment plans for our patients. Our goal is

to deliver effective, innovative and high-quality precision medicine services at an affordable price, with the purpose of enhancing the lives of the UAE community.

At Mediclinic Precise, we believe every patient is unique, and that every patient’s health management plan should be too. Through genomic testing we can target treatment to you and your DNA, by taking into account your risk for certain genetic conditions, understanding how well you respond to certain medications and

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All genetic testing is carried out using the very latest sequencing technology at our specially commissioned precision medicine laboratory at Mediclinic City Hospital in Dubai. Our multidisciplinary team of medical doctors, scientists, genetic counsellors and molecular geneticists offers support to healthcare professionals and their patients affected by or at risk of suffering from a genetic disease.

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patients and also give guidance and support to healthcare professionals who may not be specialists in this area, enabling them to use of the capabilities of these emerging technologies to personalise the management of genetic disorders, cancers and other complex multifactorial disorders to the advantage of their patients.

For further information please visit www.mediclinic.ae or email mediclinic.precise@mediclinic.ae

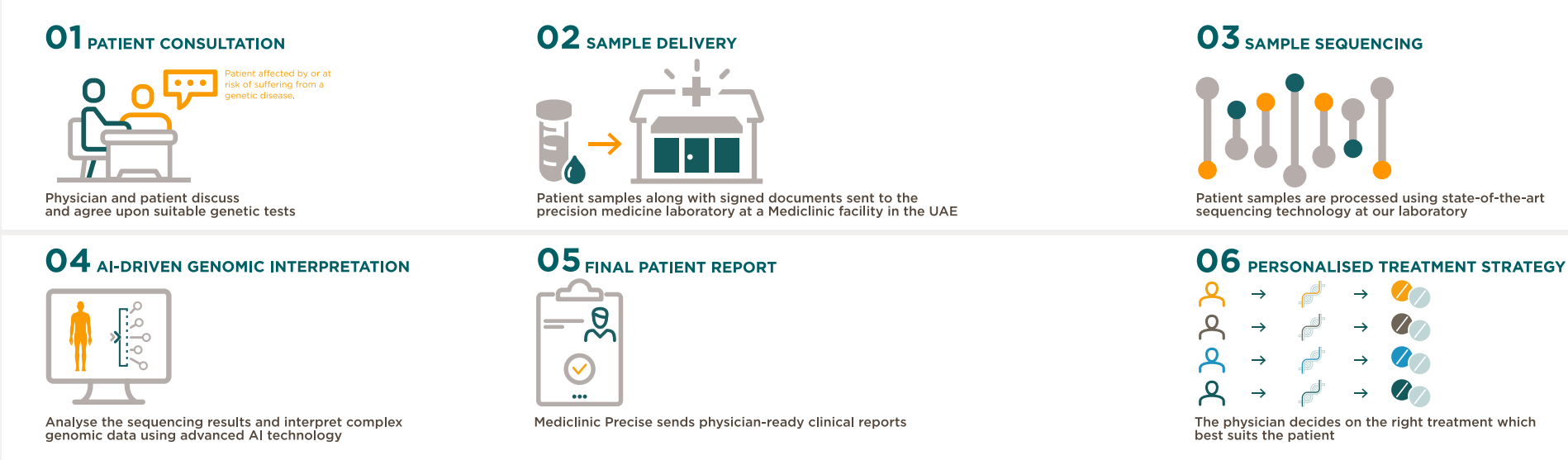


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Decoding the curious case of dystonia

By Deepa Narwani, Senior Editor

Dystonia is a brain condition where there is an abnormal control of muscles because of changes in the brain, which leads to excessive muscle contraction. Some people can have it without any known cause or due to a genetic condition where they have an abnormality in a gene that affects the brain control of muscles. It can also occur due to damage in the brain, such as a stroke or tumour inflammation.

Shedding light on the disorder today is Prof Danish Bhatti, Associate Professor; Co-Director Comprehensive Multidisciplinary Parkinson's Disease Clinic; Director, International Neurology Program; Associate Director, Movement Disorders Fellowship Program, Department of Neurological Sciences, University of Nebraska Medical Center (UNMC), Omaha, Nebraska, U.S. He will also focus on the aspects of rehabilitation in dystonia.

In an interview with *Daily Dose*, he explained that while some conditions are similar to dystonia, what separates it from others is that the contractions of the muscles are very patterned. There are specific muscles that are always involved. It's also dependent on the activity of the person. The overactivity of muscles is more in certain positions and particular tasks.

Types of dystonia

Bhatti said that since dystonia is underdiagnosed, most people miss it. It could be a muscle spasm in the jaw, feet, hand, or neck, leading to an abnormal posture of any part of the body. Or if one feels certain muscle tightness or that their posture is unusual, or there is an excessive tilting of the head, clenching the jaw or curling toes in. Anytime there is anything unusual, it should make one concerned about dystonia.

Among the different types is task-specific dystonia, meaning that the abnormal muscle contraction is only seen in specific specialised tasks that one does. One example is musician's dystonia.

Bhatti explained: "For example, if you play the piano, violin, or flute, then you may develop a dystonia where when you try to play the piano there is an excessive muscle contraction in the fingers, creating a spasm or a cramp due to which you can't play it."

A small portion of people also suffer from genetic dystonia, where it doesn't matter what kind of work they do. "If you're born with the gene, you're going to get dystonia," he added.

However, many people develop dystonia without any apparent cause. This is referred to as primary dystonia or idiopathic dystonia. In those particular patients, there have been some discussions that dystonia may occur due to excessive repetitive activity. For instance, if you're repeatedly using the same motor system in your brain, that might trigger dystonia or abnormal organisation.

He shared: "I remember seeing a patient who once developed dystonia of the right hand for handwriting. He needed to write since that was a big part of his job, so he learned to write with his left hand. Ten years later, he developed dystonia in the left hand. So those kinds of examples make us think that dystonia stems from repetitive activities. I have seen patients who have developed dystonia of typing and voice dystonia in actors acting voiceovers. There could be sports dystonia in people who play golf. The single common theme here is that when someone does repetitive tasks or activities, that puts them at a higher risk of developing dystonia."

Rehabilitation and treatment options

When asked about what sort of rehabilitation can

help patients with dystonia, he said it involves factors such as a training programme where there can be general training of the patient through different exercises, or a specialised training based on what actions are bringing out the dystonia. Some programmes look at feedback or biofeedback, where some information can be given back to the patient on their muscles either visually or through electrical stimulation. There is also a therapy that combines some form of brain stimulation or neuromodulation. One example would be to put a device on top of the skull, which creates a large magnetic field that can alter the brain's activity. It can be focused on specific areas of the brain. This can be used in combination with other exercises as one form of therapy.

"There is not a lot of research on dystonia and rehabilitation, as it is not a very common condition. It will be hard to find patients and unless you specialise or specifically see patients with dystonia. One of the biggest challenges is that all the research out there is a very poor level of evidence with few patients involved," he shared.

However, technology is starting to play a critical role in improving the lives of those with dystonia. For instance, some devices can be worn on arms and feet to help improve dystonia. There are smart devices that can react to the body movement and try to realign or reposition it to fight back excessive muscle contraction. The devices can provide sensor-based feedback; it gives an auditory stimulus signal or a visual signal feedback on what is happening with the dystonia. This technology could also be integrated into the smartphone or wearable devices to integrate with the body and figure out what kind of benefits it provides.

Bhatti stressed: "The underlying problem with dystonia is that right now, we don't have a way to cure it. There is a microscopic restructuring in the brain that causes dystonia. Once the brain

How to recognise dystonia

Bhatti highlights three common patterns of dystonia that are often missed:

1. A young female with pain in the neck, with muscle tightness. It could be neck dystonia until proven otherwise.
2. Excessive blinking. People who have trouble keeping their eyes open with any bright light eyes and want to close it tight or have to rub their eyes could be suffering from dystonia of the eyelids. This is also known as blepharospasm, which is also very common and often misdiagnosed.
3. If there is any teeth clenching or grinding, one must consider jaw dystonia.

has formed new connections, you cannot undo them so far, but maybe that will change over time. All the current treatments that we have are supportive treatments that try to block the symptoms so that patients can keep on with their daily activities without being too affected by excessive muscle activity.

"This can be done with medications or pills that work about 30 per cent of the time. Or it can be done with therapy that works for about 40 to 50 per cent of the time, but it tends to wear off over time, so you have to repeat it. If nothing else is working, then some sort of surgical treatment in the brain can be looked at to try and block some of the symptoms of dystonia. In select cases, that works about 60 70 per cent of the time, but it is much more invasive."

In the future, he said, therapy for dystonia would combine neuromodulation. This would involve altering the brain circuitry through either

magnetic field or electric field, along with therapy that uses some of these technologies that give a more accurate assessment to the therapist and more accurate feedback to the patient. This would involve retraining the brain by using different tools and modalities available.

"We are doing something similar now," he emphasised. "The treatment is multidisciplinary. Once the dystonia is diagnosed, therapy is started. Even if patients are taking medications or pills, it's not going to work in isolation, and they must go to therapy. Moreover, even if they go for surgical treatment, they still need to continue therapy and rehabilitation. In the future, it will become a more integrated model where intense technology-enabled rehabilitation will work along with some of the brain modulation, which will be less invasive."



Prof Bhatti will be discussing 'Dystonia & rehabilitation' at 16:30, at the Physical Medicine and Rehabilitation Conference.



COVID-19 and Hematological manifestations

By Deepa Narwani, Senior Editor

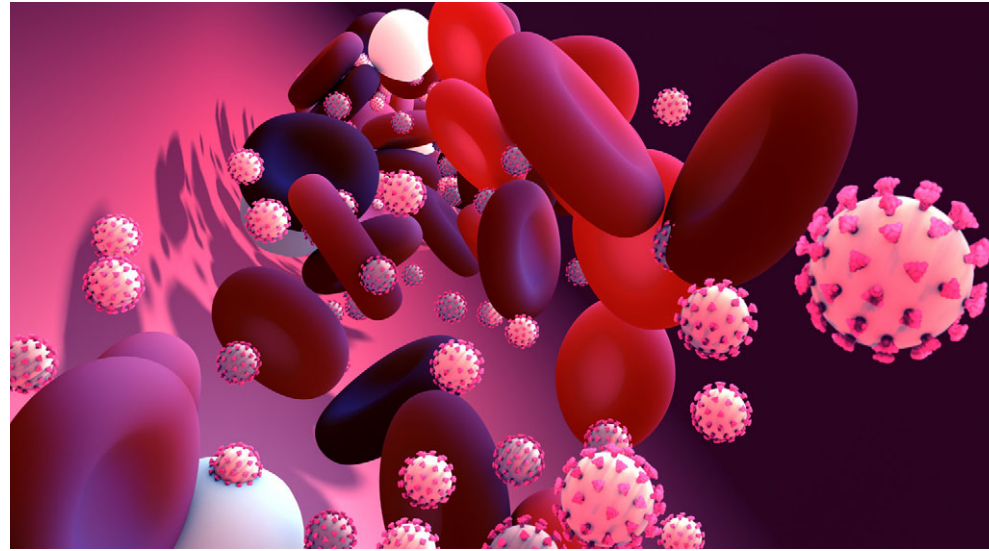
Over the last year and a half, the pandemic has shown a remarkable rise in thrombosis (blood clots blocking blood vessels) in relation to the COVID-19 infection. It raised many questions about anticoagulation treatment indications within and outside the hospital. Some countries were using aspirin to reduce the risk of thrombosis, while some others were using oral anticoagulants, which was causing a bleeding accident due to overuse.

At Medlab Middle East, Dr Kayane Mheidly, Consultant Haematology, Clemenceau Medical Center, Dubai, UAE, will be discussing the risk factor of thrombosis with COVID-19. Today, she will shed light on the physiopathology of thrombosis, how it can be prevented, and which patients require anticoagulation.

In an interview with *DailyDose*, she highlighted: "I will be discussing several important points. Haematological manifestations of the COVID-19 infection are various. The most frequent are thrombocytopenia and lymphopenia. There were also some cases of aplastic anaemia and activation of macrophages caused by COVID-19. In our hospital, we had the case of an elderly patient with the rheumatological disease with pancytopenia and severe infection, she developed a secondary hemophagocytic lymphohistiocytosis syndrome and, unfortunately, she passed away due to severe infection."

"I will also speak about vaccination and complications post-vaccination, notably atypical thrombosis etc."

However, she stressed that vaccination is recommended for all patients and that the



benefits of vaccination outweigh the risk. For instance, the immunosuppressed population is at high risk of catching severe COVID-19, and it's better to vaccinate these patients. For patients at an increased risk of thrombosis, physicians can manage the choice of vaccine and suggest which vaccination is the safest. The International Society of Thrombosis and Haemostasis also recommends that all patients should be vaccinated.

Dr Mheidly explained that the risk factor of thrombosis increases with age, inflammation for a patient with malignancies, post-surgery, with reduced mobility, pregnancy, use of oral contraception, hormonal replacements, history of thrombosis in the family. The most frequent type of thrombosis is deep vein thrombosis (DVT) and pulmonary embolism. The other types

of thrombosis are rare such as splanchnic vein thrombosis (SVT) and cerebral veins thrombosis

Impact on blood safety

Dr Mheidly said that blood donors have become quite rare due to the pandemic as people are afraid to go to the hospital and give blood. However, some COVID-19 patients have anaemia and thrombocytopenia, which has increased the need for blood transfusions.

When asked about the quality considerations that need to be kept in mind, she said that the hospital staff needs to ensure those blood donors are not infected. Blood banks should ask donors to fill out questionnaires about details such as if the patient has fever etc. If the donor is symptomatic, the blood bank should wait until they are

asymptomatic before taking blood.

"COVID-19 has taught us a lot about technology," she said. "We held a lot of virtual meetings and virtual scientific workshops. It helped us doctors to have a continuous learning process."

"Moreover, due to COVID-19, we learnt a lot about other diseases and their interaction with this disease. It was a good learning process."

She concluded: "My message is for people to please do the vaccination to stop the pandemic. People should continue to take care and stay safe by practising social distance, putting their masks on and washing their hands."



Dr Mheidly will be discussing 'COVID-19 considerations in haematology' at 10:30 at the Laboratory Management conference at Medlab Middle East.



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Becoming vitally connected

Reducing errors and saving time to improve patient outcomes

Article provided by Hillrom



The key to improving patient outcomes lies in monitoring, and rapid recognition of any changes to enable a clinically informed decision. The Royal College of Physicians developed a National Early Warning Score (NEWS2) to drive improvement in patient outcomes and to help to respond to clinical deterioration in patients.

NEWS2 is based on six physiological parameters which form the basis of a scoring system, as follows:

- 1. respiration rate;
- 2. oxygen saturation;
- 3. systolic blood pressure;
- 4. pulse rate;
- 5. level of consciousness or new confusion;
- 6. temperature.

A score is assigned to each parameter as they are monitored, with the total score giving a reflection on how the parameters vary from a 'normal' range. This then determines what actions are needed by caregivers to support escalation if required. NHS England described how this standardised approach can reduce the number of patients whose conditions deteriorate whilst in hospital, potentially saving over 1800 lives a year.¹

Standardising the NEWS2 tool across the NHS would allow for improved early detection of deterioration in patients, and thus far 70 % of acute Trusts in England are using NEWS2.² However, even though NEWS2 is being recommended to become the standard way in which vital signs are being monitored across the NHS, there are variations in the paper-based documentation of patient observations in NHS Trusts country-wide.

Despite their prominence in clinical practice, how to best monitor and interpret a patient's vital signs is often up for discussion and debate. The discrepancies in how observations are documented can be due to many variables across NHS Trusts. Issues such as staffing levels and limited treatment time are factors when it comes to the ongoing monitoring of patients.

Current guidelines recommend that patient observations are conducted every 12 hours as a minimum frequency. However, it is also widely acknowledged that this '12-hour wait' could be too long a period to effectively detect and manage patient deterioration. Inter-observer variability also impacts readings – successfully making note of an observation requires the close attention of the healthcare professional to the patient, however, in reality this can be a challenge. Disruptions by the surrounding setting such as patient/family discussions and environmental interruptions can make taking an accurate reading and transcribing difficult.

Imperial College Healthcare NHS Trust (ICH) noted these variables and decided to develop a study into whether automating this system would make important patient information more accessible, support staff in rapid decision making, highlight trends and help clarify clinical judgements on risk and escalation. The Trust invested in Hillrom's Welch Allyn Connex vital signs devices to help achieve these objectives. It was hypothesised that the use of a connected vital signs monitor, instead of manually noting patient observations on paper, would decrease caregiver time required to monitor and document a patients' vitals while also helping to eliminate the chance for transcription errors. The study evaluated the time it took for caregivers to take patient vitals with the Connex monitor wirelessly connected to a electronic medical record (EMR), compared to the time it took to take vitals manually.

The study found that ICH recorded significant time savings for caregivers when using the Welch Allyn Connex vital signs device compared to recording observation manually on paper. The mean time to take and record vitals using the Connex vital signs device was 1 minute 12 seconds, comparatively it took 2 minutes 35 seconds when recording manually. This was a difference of 83 seconds per patient, equivalent

to a time saving of 53.5 % to conduct a full set of NEWS2 observations.³

By using a connected vital signs devices, around 600 hours of nursing time was released in a year that would usually be spent on routine documentation and admin, allowing time to be channelled directly into patient care. The automation of the process also allows for greater confidence in the accuracy of the data entered into the EMR. This adds up to an estimated saving of 30 hours per month of audit time. All together this is projected as 323,500 hours a year across the ICH Trust.⁴

As a result, vitals could be all documented without delay, streamlining workflow for the caregiver, improving efficiency and enhancing patient safety. As a direct result of this study, the digital system and process, was rolled out across the entire Trust.

John Groetelaars, president and CEO, Hillrom adds; "With staffing pressures in the NHS, supporting clinicians to measure a complete set of observations within a single monitoring device could potentially save lives by quickly identifying deterioration in a patient in a cost efficient and timely manner.

"By using connected technology platforms, such as the Hillrom Welch Allyn Connex Spot Monitor, patient assessments can be standardised with information directly channelled into the Electronic Patient Record, reducing the chance for transcription error. This, in turn, improves patient safety through earlier detection of patient deterioration and a real-time individual NEWS2 score whilst also providing caregivers with escalation instructions at the bedside appearing automatically onscreen from the bedside.

"If both the NEWS2 score and the connected device platform for monitoring patient's vital signs were fully standardised across the NHS there is the potential for the early detection of patient deterioration to be improved. Updating current care facilities to a connected platform offers a digital transformation that has capacity to extensively monitor patient deterioration and drive much-needed efficiencies across the NHS reducing caregiver time and improving patient outcomes. By using and successfully implementing connected technology platforms with a standardised NEWS2 system the NHS could meet its plan to have all acute care facilities fully digitised by 2024."

For more information visit www.hillrom.com

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Millennials set to reorder healthcare and medical laboratory testing

Generation Y leads the consumer revolution, medical labs, physicians, and hospitals should develop testing services to serve them

In just 42 months, Millennials will make up 75 per cent of the workforce, according to U.S. Department of Commerce statistics. As consumers and patients, they are already triggering changes, reforms, and innovation in healthcare. It is timely for clinical lab administrators and pathologists to understand how and why Millennials expect to experience healthcare services in a very different way than Generation X and Baby Boomers. Here's a look at key developments.

By Robert L. Michel, Editor-In-Chief, The Dark Report, Spicewood, Texas, USA



Robert L. Michel

Consumers are becoming a powerful force of change as the healthcare system in the United States and other nations continues to transform. This has profound implications for those medical laboratories that want to stay at the cutting edge of clinical care with their diagnostic testing services.

As consumers radically alter the way they access medical services, medical laboratories will need to reconfigure key aspects of their services to properly serve the “new healthcare consumer” and meet the very different expectations this younger generation has for service, for quality, and for price.

For example, as more patients grow comfortable using telehealth to do virtual office visits with their physicians, how will clinical labs get access to that patient to collect the samples needed to perform the lab tests ordered by that physician as a result of the virtual office examination?

Today, specifically in the United States, the medical laboratory profession is oriented around the primary specimen collection model of:

- a. having phlebotomists in physician offices, and,
- b. maintaining a network of patient service centres, typically located in physician office buildings.

Will this existing infrastructure of specimen collection sites be viable if a greater number of patients stop traveling to their doctors' offices and instead see their caregiver using a telehealth service? Labs should ask this question in their strategic planning and develop new approaches to collecting specimens from those patients using telehealth services to consult with their physicians.

Millennials—Generation Y (born between 1981 and 1996)—are the front wave in this change in the way healthcare is accessed and delivered. They are comfortable accessing their physicians via telemedicine and virtual office visits, especially if it saves time.

Similarly, the Millennials want to use their smartphones and digital devices to have immediate access to their health records. A high proportion of Millennials also track their own health metrics with a fast-growing product category known as “wearable fitness technology.” These devices range from FitBits and Nike Fuelbands to Apple watches.

The consumer revolution in healthcare is not limited only to Millennials. Growing numbers of Gen X'ers and Baby Boomers are becoming comfortable seeing their physicians virtually, having 24/7 digital access to their health records, and using wearable devices to monitor their diabetes, deliver insulin, and track the function of their heart, among other uses.

Insurers support telehealth

Private health insurers are jumping on the virtual

physician visit trend. Not only do telehealth services meet the wants of Millennials for quick access to their doctors, but telehealth sessions are a way for payers to reduce healthcare costs without compromising the quality of care. Just this year in the United States, Oscar Health, UnitedHealthcare, and Kaiser Permanente launched or expanded virtual-first care plans.

Humana started similar health plans in the Southeast U.S. two years ago that require the patient to start a care encounter with a virtual physician visit in exchange for very low monthly premiums. Last year, Humana invested US\$100 million in telehealth company Heal specifically to help the insurer expand into new markets.

This trend of expanded acceptance and use of telehealth and virtual office visits was intensified by the outbreak of COVID-19 in the winter of 2020. From the start of the pandemic, even senior citizens proved willing to see their doctors virtually.

The American Medical Association published a report quoting Jared Augenstein, a Director at Manatt Health. He said that “between mid-March and mid-October of last year, nearly 25 million Medicare beneficiaries received services via telehealth, while Medicaid and CHIP beneficiaries received nearly 35 million services via telehealth last year.”

Convenience as a driver

Another important driver of change in healthcare shared by all consumers—regardless of their generation—is the desire for convenience. Today's healthcare consumer wants a smooth, fast, and easy experience with any retailer or service provider.

That is why patients are increasingly frustrated with how they are forced to interact with hospitals, doctors' offices, clinical laboratories, and other providers. It is still common for a patient with an

appointment for a health service to walk into the facility and be handed a clipboard with a form to fill out with pen or pencil. Patients must sit in the lobby and fill out forms before they can access their doctor or have a procedure performed.

This example shows why patients—as consumers—are frustrated with the healthcare system. They understand that, if they are buying

Four ways that consumers are encouraging change and transformation in healthcare

If medical laboratories groups want to continue to meet and exceed the expectations of consumers and their patients, they need to recognise how consumers are changing many aspects of healthcare. Below are several primary trends in consumerism as they relate to how consumers want to be served by their healthcare providers, including hospitals, physician offices, and laboratories.

Convenience:

Consumers want fast access to personal services. In healthcare, think of the growth of medical clinics in retail stores, the big shift to put laboratory patient service centres in retail pharmacies and grocery stores.

Examples: Walmart's healthcare supercentres, branded as “Walmart Care Clinic.” CVS Pharmacies' “Health Hubs” and “Minute Clinics.”

Personalisation:

Consumers turning to the web for information before seeing their physicians and to find providers; they want their doctors and care providers to know them and their unique needs.

Examples: Amazon Prime Members recognised at log-in and have just two clicks to purchase. Starbucks mobile app handles the order and payment before customer gets to the store.

Technology:

Consumers want to track their own exercise and health factors in real time. Think consumers using wearable monitors for exercise, monitoring blood glucose levels (for diabetics), using remote monitoring devices prescribed by their physician; digital access to health information that alerts them digitally to test results, etc.

Examples: Fitbits, Apple Watches, Abbott Laboratories' FreeStyle Libre device, cardiac rhythm remote monitoring devices.

Transparency:

Consumers, particularly those with high-deductible health plans, want to know the price of service before choosing a provider.

Examples: Growth of benefit investigation (BI) for expensive genetic tests, prices posted publicly at Walmart's healthcare supercentres, CMS Medicare website with provider prices, Castlight Health's website with provider prices.



Identifying other forces shaping healthcare

Fortunately for the medical laboratory profession, the pace of healthcare’s transformation will allow adequate time for labs to identify and understand key trends, then develop appropriate strategies in response to those changes.

Healthcare’s transformation in the U.S. includes discrete elements. These are elements that The Dark Report tracks regularly. They include:

- New emphasis on proactive care, compared to the reactive care of past decades.
- Continued efforts to shift care from inpatient to outpatient settings because hospitals are the most expensive sites for medical care.
- Tighter integration of both clinical services and the organizations that provide those services.
- Digital health records that are truly interoperable, allowing data to move freely across all classes of providers.
- Emphasis on reducing variation in care provided by different doctors so that the treatment delivered to every patient is consistent with the care protocols for their health conditions.
- Telehealth/Virtual physician visits.
- Value-based payment to providers.
- Consumer-driven change.
- Primary care’s move toward clinics based in retail pharmacies and in neighbourhood shopping centres.
- For labs, what The Dark Report describes as distributed testing, enabled by a coming generation of small, miniaturised instruments that deliver accurate results inexpensively at the point of care and in near-patient settings.



Caption: In the United States and other nations around the world, healthcare is being reinvented so as to meet the needs of the Millennial Generation and other consumers who want faster access to care, personalized service, and low prices. WalMart, known for its low-price leadership, is now building what can be described as

“healthcare service hubs” that are located near where consumers live. Shown above is one of the early clinics Walmart opened in Georgia. Not only does this clinical provide primary care, but it offers lab tests, x-ray/ imaging, optometry, dental, hearing, and mental health counseling. (Photo copyright WalMart.)

For example, the “Greatest Generation” (those Americans who fought World War II and parented the Baby Boomer generation) were typically recognised to be compliant patients. They usually accepted their doctor’s diagnoses and recommendations with few questions.

This is generally not true of Baby Boomers. They are the generation of patients who do deep-dive research into their health conditions. They then arrive for their appointment carrying a stack of published clinical studies and press the doctor to absorb this information and incorporate it into their treatment plans.

Then came Generation X

Generation X continued the research trait of the Boomers, but also began adapting to new models of primary care. The rapid growth and popularity of urgent care centres that opened early in the morning and stayed open late and on the weekends in the United States could be considered a response to Gen X patients who want 24/7 access to healthcare whenever they have earaches, sore throats, and sniffles. Urgent care centres provided consumers with a friendlier place with faster treatment for many minor conditions, compared to emergency departments and A&E departments found at local hospitals.

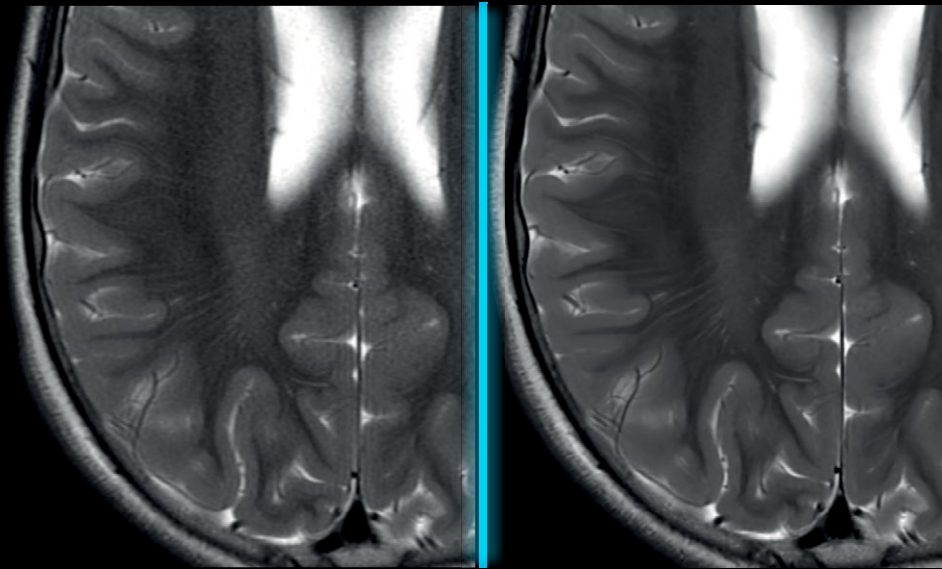
So much of healthcare and medicine is changing because of Millennials—who grew up with computers, mobile communication devices, and the Internet. Millennials tend to be more demanding consumers of healthcare.

Thus, medical laboratory leaders would be well-served to understand Millennial lifestyle preferences and meet those expectations.

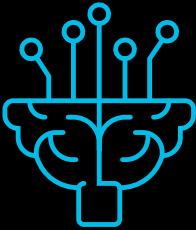
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Michel will be discussing ‘Strategic laboratory leadership in a disruptive healthcare environment’ at 16:15 at the Laboratory Management conference at Medlab Middle East.

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Pushing the envelope of innovation

By Deepa Narwani, Senior Editor

When the world was struggling to attain reagents for COVID-19, Unilabs developed its own in collaboration with Khalifa University, which was manufactured locally in the UAE. In an interview, Mohammed Daoud, CEO, Unilabs, shared that the company also pushed the envelope for innovation by doing research on saliva testing for COVID-19 in collaboration with Mohammed Bin Rashed University (MBRU). He said: "By doing so we were successful in providing alternative and more comfortable ways to detect COVID-19 in patients of determination, children and the elderly." Excerpts:

Could you tell us how Unilabs has responded to the COVID-19 crisis?

Unilabs was on the forefront of the response with pre-emptive plans already in place to deal with global health emergencies. As for the UAE, to which we devote great interest in our network of laboratories and based on our well-established partnership with health authorities, we ensured to fulfil the needs of the local health authorities, first, before taking on any private clients for COVID-19 PCR testing.

The theme of Medlab Middle East this year is 'United by business - Driving the industry forward'. How in your opinion can businesses continue to operate in the new normal?

COVID-19 has been a challenge to businesses around the globe and has made the healthcare sector an industry with active involvement and impact on businesses of all types. Big challenges create great opportunities. We have been inspired by the UAE leadership and government, which support the private sector. Together, the healthcare ecosystem can unite and strive for a world where businesses and its people can continue their work safely and as fully as possible.

We believe that collaboration can identify how healthcare and safety needs can be met across industries, this is essential to driving services that are supportive and better meet the needs of different businesses

Unilabs believes that competition within the industry is very essential to foreseeing the future innovation and should be based on the value our clients and patients receive, not on our cost. When we compete on value, we focus on delivering superior results, whilst ultimately creating an efficiency by increasing quality and reducing wastage. It motivates us to remain innovative whilst creating a better experience for our staff, patients, clients and the environment at large.

What impact are technologies such as AI, machine learning, blockchain having on healthcare in your opinion? What are some of the growth areas in the industry?

We take great interest in incorporating artificial intelligence and blockchain technologies into our laboratories. AI and machine learning are enabling significant improvements in enhancing precision, minimizing cost and increasing capacity. Treatments and required diagnostics can be individually tailored to the needs of each patient, and their desired health outcomes.

Further to this, these advances allow for the monitoring of patients and predictive analytics that allow us to identify anomalies and disease progression earlier.

What this means for the patient is that they can enjoy wellness and health in a safer, more customised and convenient way. Their medicine can be given to them in the exact dose that their



Mohammed Daoud

body needs, and not a generalized standard. A heart patient can be made aware if they are at risk of an eminent heart attack. Patients who previously required monitoring in a hospital setting can do so from the comfort of their home, surrounded by their families.

Blockchain will allow us to strike a balance between patient confidentiality and convenience, by ensuring that patient data shared digitally is done so whilst protecting patient related data.

What, according to you, are the opportunities available to healthcare and trade professionals who attend Medlab Middle East?

Medlab is the largest laboratory exhibition in the Middle East, and is an innovative platform for communicating with experts, specialists and innovators, in which companies showcase their most important innovations. In addition, the ability to network and establish new contacts as well as the platform for important conversations about innovation in the medical field.

Could you shed light on any plans or partnerships?

We are launching an innovative health App allowing customers to have more interaction and control over their health and results. The app will not only allow customers to schedule and make an appointment for COVID-19 testing at Unilabs units and partnered facilities but also keep a record of any reports produced by Unilabs. This new process will enhance turn around time (TAT) by utilizing a check-in QRcode, avoiding unnecessary contact at a time where social distancing is key.

In line with our group mandate of accelerating into digitalization, we are expanding our teleradiology and digital pathology services to enable complete sub specialization for all reporting. Our goal is to bring the best in diagnostics from around the world to support innovation within our regions. This also expands to our Genetic testing for oncology, fertility and rare diseases and we will be expanding our partnerships for genetics in the region in the near future.

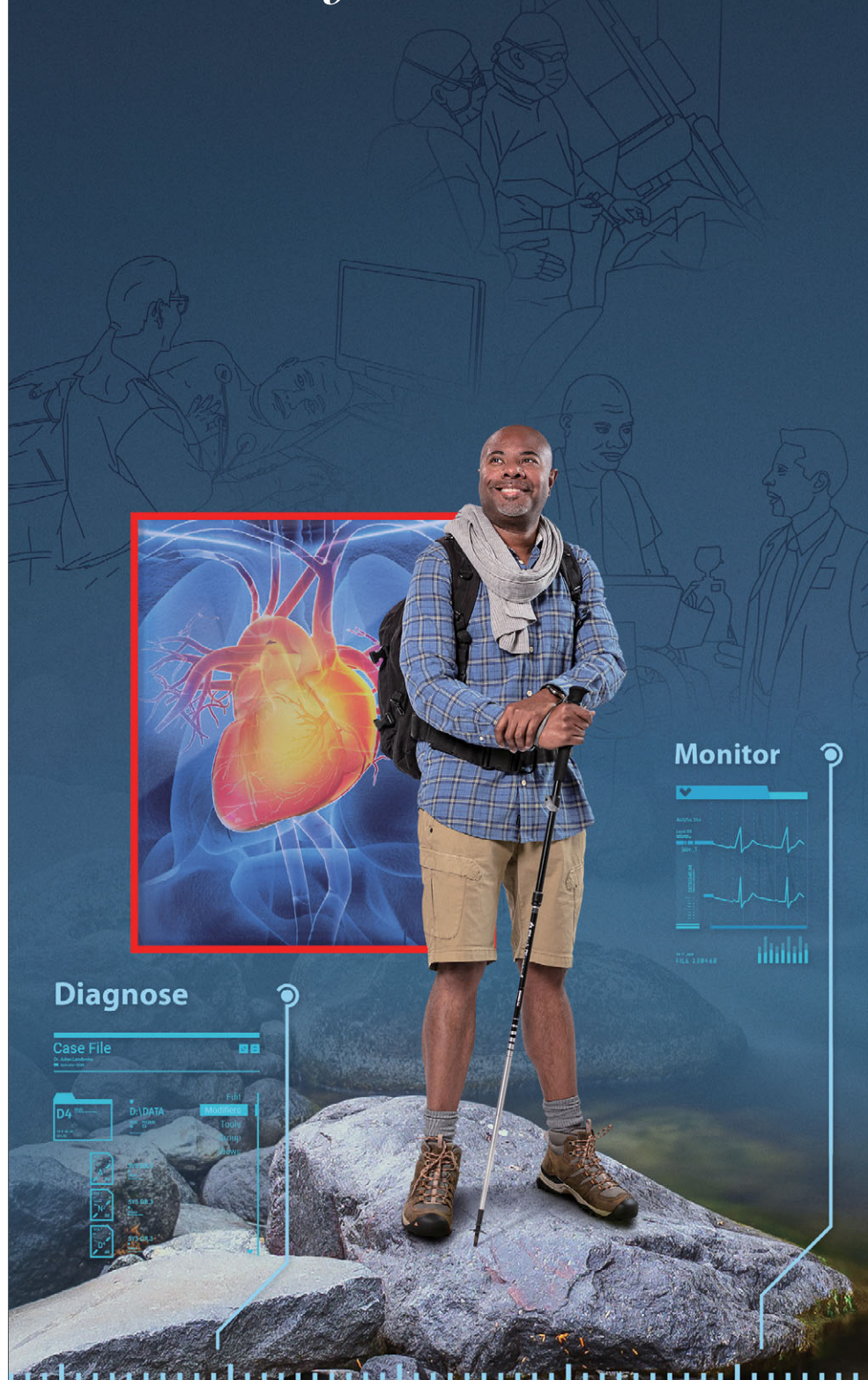
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"Blockchain will allow us to strike a balance between confidentiality and convenience"

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Making connected care a reality

Philips latest platforms that are driving the digitisation of healthcare will be showcased at Arab Health.

By Deepa Narwani, Editor



Vincenzo Ventricelli

As a leader in health technology, Philips will be showcasing the company's latest innovations created to improve patient and healthcare professionals' experiences, while delivering better health outcomes, at a lower cost of care, across the care continuum at Arab Health 2021.

For instance, the company will be showcasing the Philips eICU and telepathology platforms that are driving the digitisation of healthcare, bringing the world a step closer to patient-centred care, and enabling access to specialists regardless of location.

Philips will also be introducing the newly launched Spectral CT 7500, which was designed for the first-time-right diagnosis and provides a simple workflow. Spectral is always on, so every scan offers both conventional and 100 per cent spectral results. This can translate into a 34 per cent reduction in time to diagnosis, a 25 per cent reduction in repeat scans and a 30 per cent reduction in follow-up scans.

"Arab Health always provides an invaluable opportunity to connect with like-minded stakeholders and potential partners; to listen closely to developing needs, and to connect them to available innovations. We're looking forward to co-creating solutions that help improve outcomes, patient and staff experience and productivity across the region, and so increasingly delivering value-based care," said Vincenzo Ventricelli, Chief Executive Officer of Philips Middle East, Turkey & Africa.

In an interview with Arab Health, the CEO stressed that it is important to build on the foundations that were set during COVID-19 where health systems and innovators alike had to pivot and adapt quickly to respond to the crisis.

"One of the biggest leaps forward is that connected care is finally becoming a reality. This means a healthcare infrastructure centred around the patient, with a focus on the healthcare continuum – from healthy living and prevention to acute care in hospitals and chronic care in the home. And above all – telehealth, ensuring that specialists can access vital patient data and can collaborate regardless of location."

Connected care requires integrated systems and strong partnerships that support seamless data flows and analytics between care providers and across settings. Over the past year, the pandemic has accelerated this need among customers, caregivers, and their patients, more than ever before. Connected care is something that Philips has been working towards for years, Ventricelli stressed, which meant that the company was in a good position to help its partners during the pandemic.

"In the next normal, the system at large will need to increasingly move towards value-based care – shifting care delivery from compensating volume to compensating value and redefining financial incentives toward better patient

outcomes," he highlighted. "And to realise the potential of connected care by focusing more on the benefits of telehealth in acute and preventative care; prioritising healthcare rather than sick care, as care and consumer worlds continue to converge."

The pandemic has also highlighted the need for sustainable and hassle-free solutions. If the supply chain is compromised, healthcare providers need to know that they can still continue care.

Ventricelli said: "With the Philips BlueSeal magnet, we are able to address helium scarcity, to reduce potential long interruptions to MR services due to helium issues and eliminate helium refill costs during the magnet's lifetime.

"We have developed the industry's first and only 1.5T fully-sealed magnet, relieving helium-related complications and unpredictability and securing peace of mind by delivering sustainable and more productive, helium-free MR operations. Our goal with the BlueSeal magnet is to take away worries about potential helium-related issues of classic magnet design, to support uninterrupted MR services and to eliminate dependency on scarce helium supply to deliver essential healthcare during the pandemic and beyond."

A multi-pronged approach to tackle COVID-19

Philips has been involved in various efforts to tackle the COVID-19 crisis from the outset through a multi-pronged approach that provided support to patients, governments, healthcare workers and its people, including:

1. Scaled up production and innovation of critical care products and solutions

As early-response support, Philips increased the production of certain critical care products and solutions to help diagnose and treat patients with COVID-19. The most needed products were patient vital signs monitors and portable ventilators and medical consumables for non-invasive and invasive ventilation to treat a broad range of respiratory conditions.

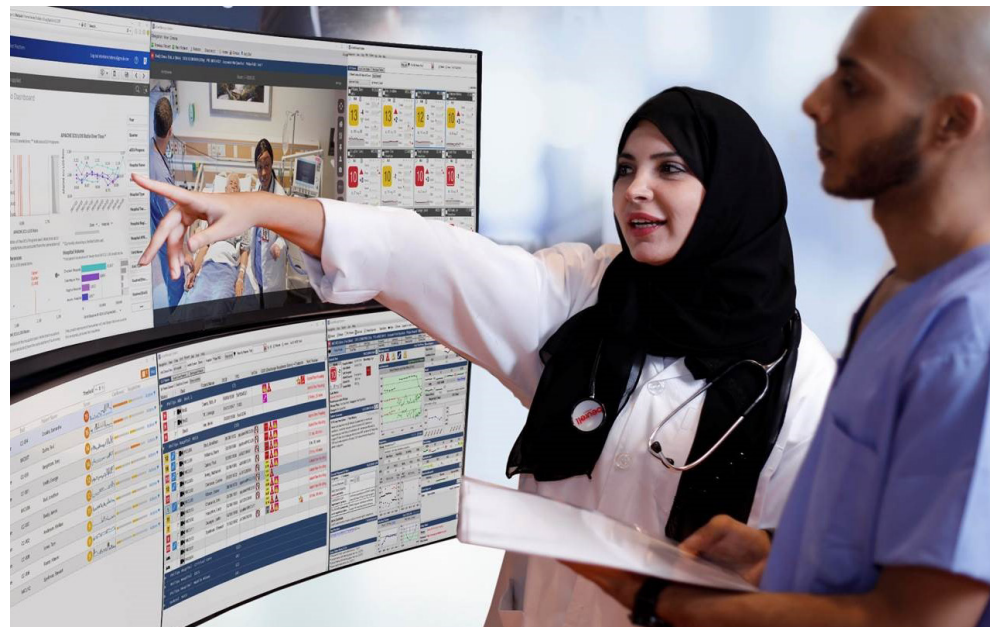
In addition, Philips dispatched Rapid Equipment Deployment Kits, which combines the company's advanced patient monitoring technology with predictive patient-centric algorithms to enable care teams to quickly scale up critical care patient monitoring capabilities within a few hours.

In addition, the company also launched the first-of-its-kind mobile Intensive Care Units (ICUs), designed to meet the critical-care requirements of patients. These solutions are used by government agencies and health systems to rapidly increase ICU capacity and enhance community outreach to mitigate the impact of natural disasters and pandemics such as the ongoing COVID-19 outbreak.

Beyond this, Philips' comprehensive portfolio of services and solutions can help to support the delivery of high-quality care to COVID-19 patients and were designed for rapid deployment and scalability. It includes products and solutions to help address the preparedness, response and recovery needs of COVID-19, and includes a range of diagnostic imaging systems (CT, mobile diagnostic X-ray, and ultrasound) to help diagnose and assess respiratory conditions. This also includes hospital telehealth solutions to centrally monitor and manage patients in the intensive care unit (Philips eICU programme), and telehealth solutions to connect caregivers and patients at home.

2. Regional support to enhance capacity

"In partnership with the Philips Foundation, we provided medical equipment and expanded capacity through modular field hospital setups; and support for the Red Cross answering critical healthcare challenges in



Analysis by CARTI Cancer Center in Little Rock Arkansas and University Hospitals of Cleveland - Results from case studies are not

predictive of results in other cases. Results in other cases may vary.

the most affected regions, and accelerating access to critical care," Ventricelli shared.

3. Healthcare worker backing

From supporting remote installations of critical diagnostic equipment to providing training and education in the form of regular clinical webinars for knowledge sharing, healthcare practitioners' support has been an ongoing priority for the company throughout the pandemic.

4. Internal care and support protocols

"Finally, we have welcomed work from home protocols, allowed our installation and technical support teams to rely on more digital solutions, helped our teams tap into available vaccination programmes, and introduced employee wellbeing initiatives to support our teams' increasingly complex work and home environments," he added.



Digital transformation

When asked about the impact of smart technologies in improving patient outcomes, Ventricelli said that AI can offer several advantages including being the basis for systems and solutions that can sense, reason, act, and adapt to assist with complex and repetitive tasks.

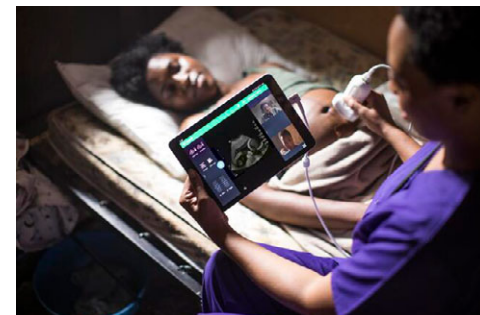
In addition, combining AI with deep clinical and domain knowledge can turn data into actionable insights that support decision making. Examples of this include early warning systems alerting to patient deterioration which allow for early intervention and treatment.

At Arab Health, Philips Connected Care Leader, Dr Samir Said will be discussing this in detail during his keynote presentation at the AI conference

"I believe the true growth area lies in personalisation; not just putting patients at the centre of care but personalising care to a specific patient; with a holistic view of the patient's genotypic and phenotypic information while arming care teams to make decisions efficiently, collaboratively and accurately by providing expert clinical guidance," emphasised Ventricelli.

Beyond that, he said, growth lies with telehealth, in maximising the opportunities to provide quality care where it's needed most by unlocking the full potential of healthcare digitisation and virtual collaboration. This is specifically beneficial in countries where patients in more remote areas might not currently have access to a robust healthcare system.

For instance, with the right remote support, trained midwives in primary care facilities can play an integral role in early detection, diagnosis, and follow-up of pregnancy and pregnancy-related complications in rural, underserved communities. Patient data can be shared digitally across locations, enabling virtual consultation, remote diagnostic assistance, and monitoring. Overall, this helps create a more connected maternal care ecosystem in which pregnant moms in remote locations have better access to the care they need.



Talking about the company's future plans, Ventricelli said that beyond ongoing advancements in technology and evolving solutions to help achieve better health across the region, the company is also finalising some exciting partnerships that will set the scene for the digitisation of healthcare.

He concluded: "By 2030, our global goal is to improve the lives of 2.5 million people a year, including 400 million in underserved communities, making the world healthier and more sustainable through innovation. In support of this ambition, I am proud of Philips' role in transforming the sector to realise value-based care, as we continue to reinvent ourselves to remain relevant to society throughout our 130-year history.

"Marked by innovation, collaboration and social responsibility, we are excited about the latest advancements that accelerate this transformation, while we celebrate our collective resilience over the last year to enable business and care continuity, as a strong base to build healthcare for the future."

Visit Philips at stand S1.D10 at Arab Health

Clinically proven innovation in osteoarthritis knee pain treatment on display

Article provided by Sublimed

At Arab Health, Sublimed, an innovative start-up working in the field of medical devices and e-health is unveiling its drug-free chronic pain management device: actiTENS

An innovative start-up

Did you know that 20 per cent of the world's population suffers from chronic pain? Founded in 2015, Sublimed understood the main challenges and looked at innovating and developing a non-drug and non-invasive treatment based on transcutaneous electrical neurostimulation (TENS) therapy. In 2018, Sublimed launched its portable and miniaturised neurostimulator, actiTENS. A true breakthrough for patients who do not have many alternatives other than medication and especially opioids, which were responsible in 2020 for more than 80,000 deaths only in the United States.

From chronic pain to active life

actiTENS is a compact and connected neurostimulator based on transcutaneous electrical neurostimulation therapy. It directly targets patients' pain through two mechanisms, the first actively interfering with pain signals' neural transmission, and the second stimulating the production of endorphins, for long-lasting

pain relief effects. The device can be controlled directly from a smartphone, be used unnoticeably and accompanies patients in their daily activities. Its small size, light weight and flexible architecture enable easy placement on different parts of the body, in accordance with patients' needs and doctors' recommendations. actiTENS has now more than 10,000 active users in France and is beginning its international expansion to provide chronic pain patients around the world with a clinically validated drug-free treatment.

A clinically proven revolution in osteoarthritis knee pain treatment

Sublimed recently completed a clinical study on 110 patients with knee osteoarthritis. The study findings demonstrate the superiority of actiTENS over weak opioids (tramadol, acetaminophen-opium powder, etc.) in managing osteoarthritis knee pain. After a pain reduction by more than two points on a scale of 0 to 10, patients with severe pain were able to reach a state of mild pain thanks to actiTENS after only three months. actiTENS is thus a more effective drug-free therapeutic alternative to opioids, which are a source of addiction, inconvenience and daily danger for patients, especially when used for extended periods of time.



* Opioids are a class of drugs that include synthetic opioids such as fentanyl, and pain relievers available legally by prescription, such as oxycodone (OxyContin®), hydrocodone (Vicodin®), codeine, morphine, tramadol, acetaminophen-opium powder and many others.

Visit Sublimed at Arab Health at the Za'abeel 2 - French pavilion (Booth Z2H53) and find out more about this drug-free medical device for chronic pain management





PHILOSOPHY

At Al-Futtaim Health, we strive to redefine the healthcare experience by delivering high quality, smart and integrated care. Enriching lives through accessible care for all in our urgent and integrated family health primary care centers. The use of smart technology, experienced clinical teams and our center of excellence partners, allows us to achieve better clinical outcomes.

ACCREDITATION

In partnership with Accreditation Canada our HealthHub Clinics will be the first clinics in the region to apply for Platinum accreditation status and to be the first certified people centered care facility in the Middle East.

PROMISE

We use technology to hear you better. We listen to your heartbeat, but also to your story. We are here to make healthcare personal and holistic. So we can make the right decisions together. We believe this is healthcare as it should be. For everyone.

The global innovation of hand hygiene

Article provided by WK-MedTec



At Arab Health, WK-MedTec is launching its Hand-Sanitizer, which leverages the integration of cold plasma technology in combination with contactless and alcohol-free hand sanitation in only 15 seconds. This innovation has taken the domestic market of Germany by storm.

The application is simple: hands are held into the device and a micro-hue of cold plasma mixed with purified water is gently applied.

People are living in a world where impeccable hand hygiene has become a non-negotiable in every arena of life. Whether we go on a trip, go out for dinner, go to work, or just go for a stroll... people request the presence of hand-sanitation opportunities wherever they go. That is the standard that people expect.

How has the world been doing in serving that standard? Quite frankly, not very well – alcohol-based disinfectants (which have been used with varying levels of success for hundreds of years) are found on almost every corner... and yet one

cannot help but question their less than ideal results - over 50 per cent of the people that want to use an alcohol-based disinfectant station find it to be empty. 8/10 people who use an alcohol based disinfectant aren't able to fully disinfect their hands due to improper use of the product. The clear majority of users complain about its unpleasant stench and dermatologists confirm that such disinfectants can cause long-term skin-damage when used repeatedly.

The founders of WK-MedTec looked at this market and asked themselves a very simple question:

"Can we do better? Can we leverage the three core-values of our company (quality, simplicity, and sustainable innovation) to create a product that provides customers with a fully functional, easy-to-use, and consumer friendly sanitation device that re-defines the standards of day-to-day hand hygiene?" said Wilfried Krömker, Co-CEO

Out of this conversation, the Hand Sanitizer was born. The product has three distinct USPs: it is made in Germany, it is fully sustainable (economically, environmentally, and socially), and it is alcohol free.

Moreover, the re-usable storage tank system is built around economic, environmental, and social sustainability.

Furthermore, the micro-hue of purified water and plasma creates the sensation of soft and well moisturised hands once the sanitation cycle is complete.

Visit WK-MedTec at stand Z3.C15

Cardiac Insight, Inc. launches Cardea SOLO wearable ECG monitoring system

Leading ECG analysis platform speeds time to diagnosis and creates greater clinical efficiencies

Article provided by Cardiac Insight



Cardiac Insight, Inc. is a US-based healthcare innovator specializing in wearable cardiac sensors and proprietary software that automatically analyzes electrocardiogram (ECG) data to improve early detection and diagnosis of cardiac arrhythmias, such as atrial fibrillation (AFib). The company is launching its Cardea SOLO™ ECG System ("Cardea SOLO") at Arab Health 2021.

Cardea SOLO™ combines a single-use patient-friendly wearable ECG sensor with 100 per cent in-clinic automated software managed by clinicians. The Cardea SOLO, with its proven arrhythmia analysis technology, includes comprehensive report generation and clinical editing tools for the full disclosure data, creating efficiencies and reduced processing time for clinicians.

The platform facilitates improved patient care and better patient compliance while keeping patient data securely in-house and enhancing overall cybersecurity for hospitals and clinicians, including cardiologists and electrophysiologists.

"Cardiac Insight continues to expand globally. We are pleased to participate in Arab Health 2021. Our goal is to increase awareness about our

innovative FDA-cleared Cardea SOLO wearable ECG system and promote new clinical and business development partnerships in the Middle East to reach more patients," said Brad Harlow, Cardiac Insight's CEO. "The Cardea SOLO revolutionises the cardiac arrhythmia diagnostic process by replacing bulky, wired Holter ECG monitors with patient-friendly ECG wearables that improve diagnostic yield, speed the time to diagnosis, streamline workflows, and ultimately elevate the standard of care."

The Cardea SOLO wearable single-use ECG sensor is typically applied to the patient in a hospital, clinic or physician's office and can be made available for telehealth options. After an optimal seven-day wear period, the patient removes and returns their sensor to their physician's office by mail or in person. Cardea SOLO's robust, algorithm-based ECG software produces a comprehensive draft report which facilitates prompt clinical review and decision-making, reducing the overall time to diagnosis and treatment.

Visit Cardiac Insight at stand H1.D10-C

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— makes the —

DIFFERENCE

Our commitment to Quality is the reason why Malaysia continues to be the world's leading exporter of medical gloves, condoms & rubber catheters.

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Leader Healthcare's Holistic Approach

The tides have turned for good. As we welcome a new normal, digitization in healthcare will have a long-term role in reshaping the industry where excellence and wellness is the norm, directly aligning with Leader Healthcare’s vision.

Sukhdeep Sachdev
Global CEO, Leader Healthcare Group

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Leading Innovation in UV-C Infection Prevention

Surfacide® provides an evidence-based, automated UV-C decontamination technology that data indicate is effective against multi-drug resistant organisms including C.diff, MRSA, VRE, CRE and Acinetobacter. The Surfacide Helios system incorporates multiple emitters that disinfect* healthcare environments in a single cycle - including the bathroom.

1 Shadows Matter

Data show UV-C is less effective on surfaces in shadowed areas. Surfacide's multiple emitters operating together significantly reduce shadows and deliver energy more effectively versus first generation UV robots.

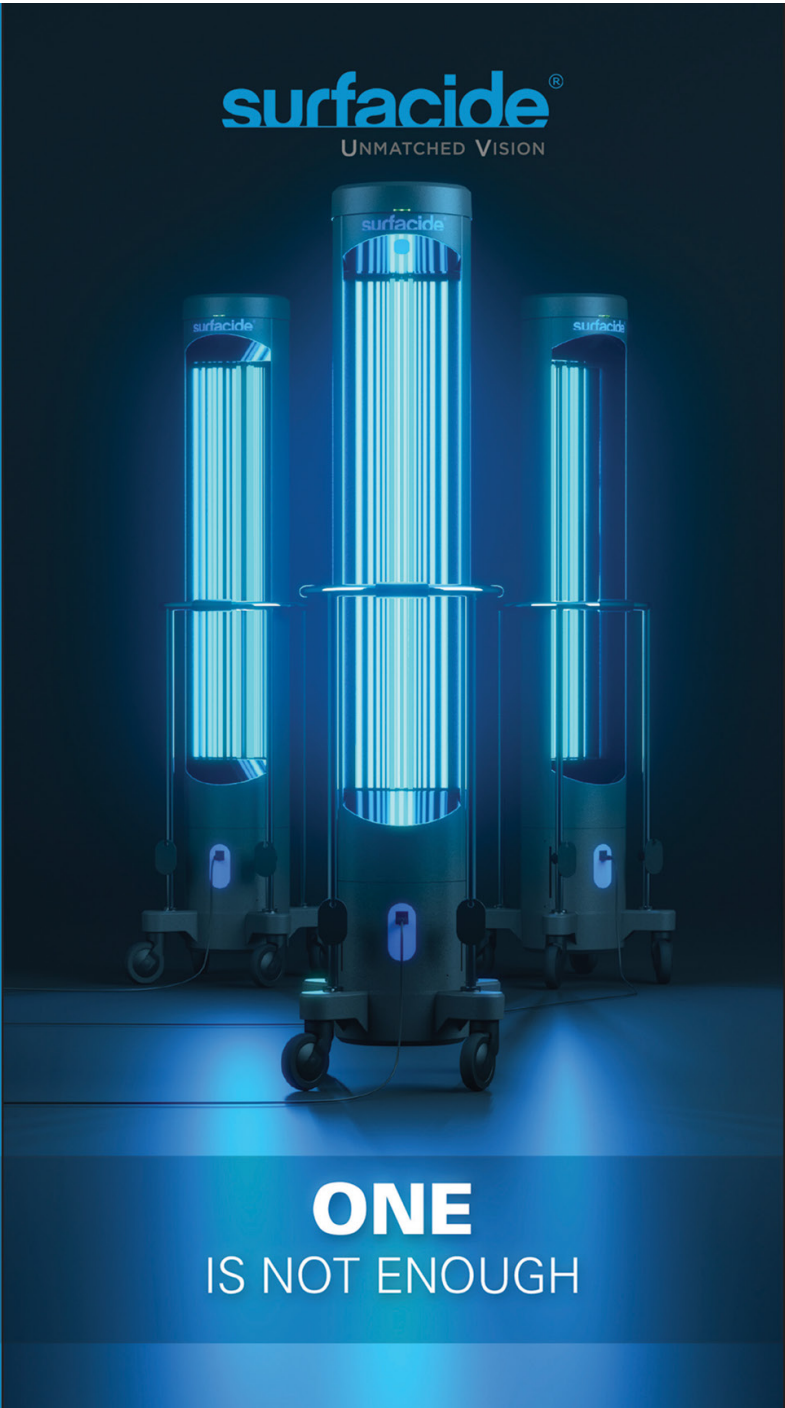
2 Greater Coverage

Distance is critical to UV-C efficacy. As the distance increases, less energy is delivered to surfaces. Surfacide positions multiple emitters closer to high-touch surfaces, delivering more energy throughout the room in a single cycle.

3 Decreasing Time & Labor

Single emitter systems should require frequent repositioning and extended run times. Surfacide's automated system provides shorter cycle times and increased staff productivity without repositioning.

Disinfection or *disinfect is defined as the reduction of pathogenic bioburden.



Why Surfacide?

Create a healthier environment

Join more than 350 leading hospitals around the world that have completed 1 million+ Surfacide cycles.

Unparalleled Innovation
Leading the UVC market with comprehensive advancements providing you with the power to do more.

Meaningful Design
Easy-to-use technology purposefully engineered from top to bottom for unmatched performance and mobility.

Flexibility
Emitters operate individually or in multiples according to the size of the space. Unique "Scrub" mode targets defined areas unable to be addressed by single emitters.

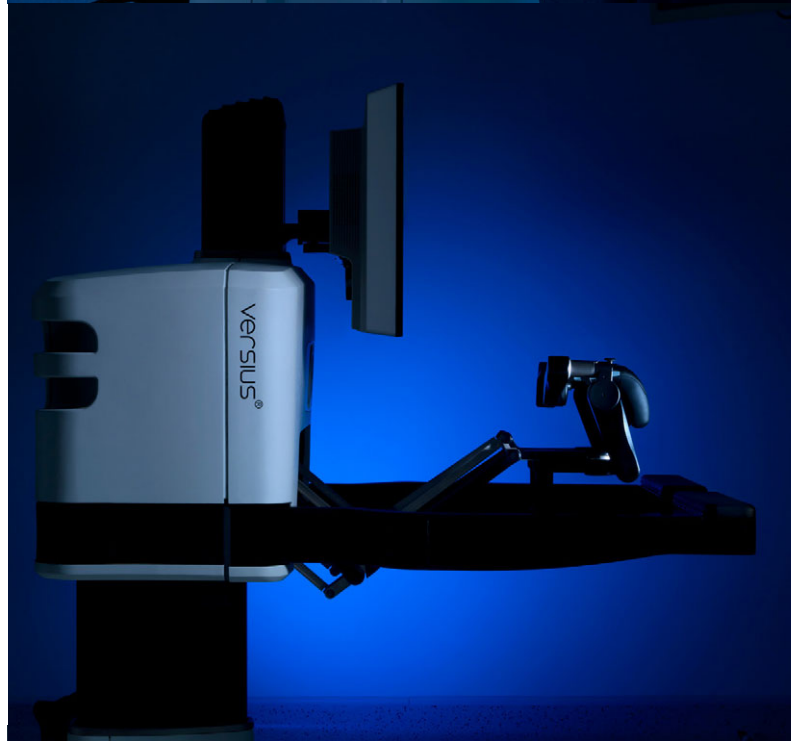
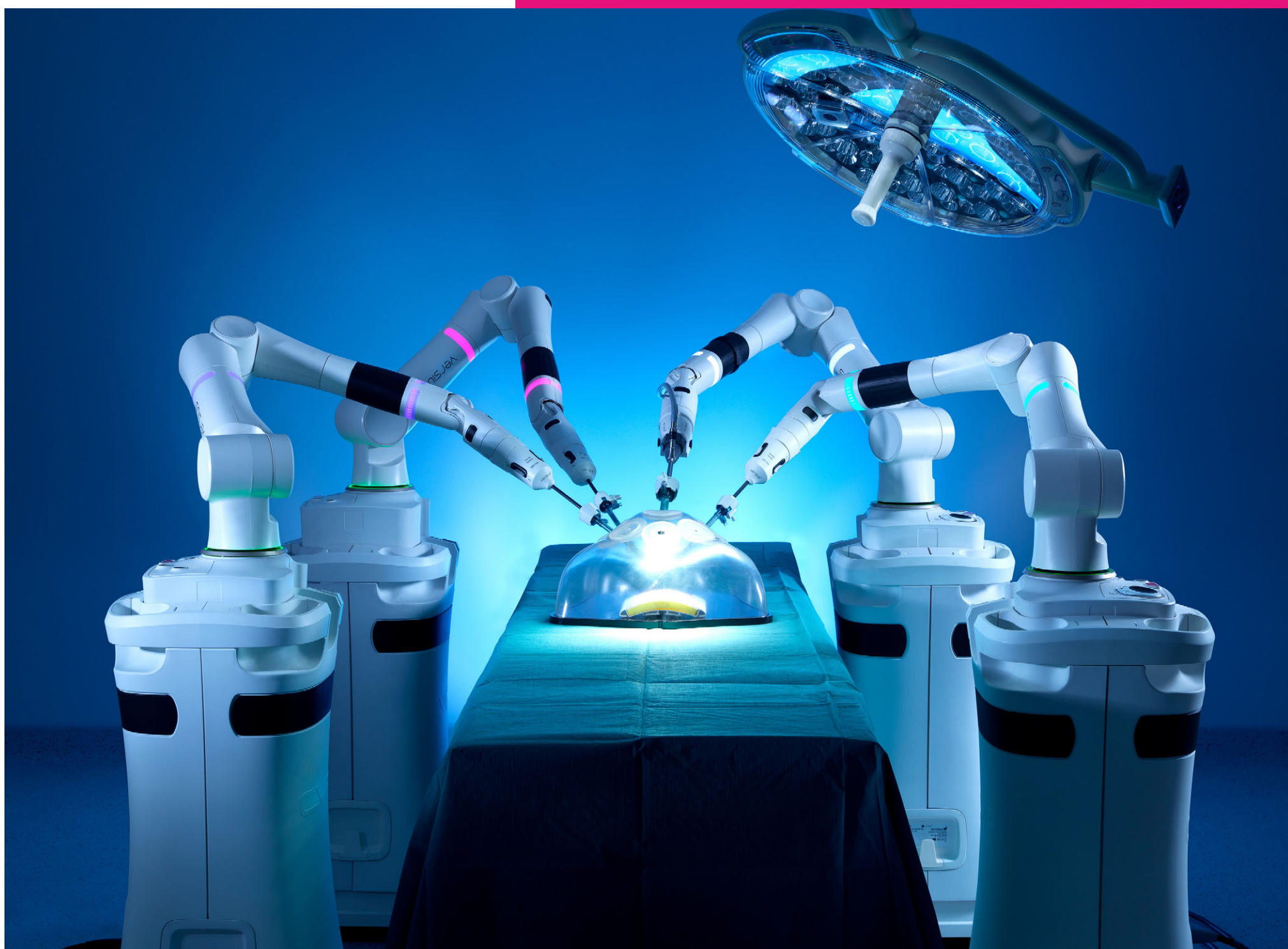
SURFcare
Hassle-free support including over-the-air software updates, accessory and equipment exchanges, and cloud-based portal for peace of mind.

SURFcloud
Real-time data archive provides actionable reports to drive outcomes and utilization.

Training and Support
Multidisciplinary team of experts focused on the goals necessary to achieve your success. Onsite and virtual ongoing training provided.

Cost Advantages
Greatest value in UV disinfection including 3 UV-C emitters, control tablet and multiple safety sensors all priced similar to most single emitter systems.

Multilingual
Surfacide support personnel, tablet app and manual are all available in multiple languages.



**"Let's transform surgery
together...for good"**

Visit Hall 4, A10