

## A milestone celebration of innovation and collaboration

Celebrating 50 years of progress and pioneering the future of health

BY Arab Health staff

s Arab Health celebrates a landmark 50year anniversary, it stands as a testament to the evolving landscape of healthcare, driving innovation and collaboration on a global scale. This golden jubilee is not just a celebration of past achievements but a forward-looking beacon for the future of healthcare. Arab Health 2025 promises to be an extraordinary event, unfolding over four days at the Dubai World Trade Centre and Conrad Hotel, showcasing the latest in medical advancements and the intersection of technology and patient care.

#### Shaping modern healthcare with innovation and technology

The digital transformation in healthcare continues to accelerate, with Arab Health 2025 placing significant emphasis on AI and digital health technologies. From AI-assisted diagnostics to telemedicine platforms, these innovations are redefining patient care, making it more



personalised and accessible. The global market size of AI in healthcare was estimated at US\$19.3 billion in 2023, and it is expected to grow at an annual rate of 38.5 per cent till 2030. Arab Health will feature cutting-edge exhibits and sessions focused on the integration of these technologies, highlighting their role in enhancing diagnostic accuracy and improving health outcomes.

#### Sustainability and quality management: prioritising patient safety

With the healthcare sector recognised as a notable contributor to global emissions, Arab Health 2025 underscores the importance of sustainable practices within the industry. The event will introduce the latest strategies in environmental sustainability, aiming to reduce

the carbon footprint of healthcare facilities while maintaining high standards of patient care. Concurrently, the emphasis on quality management and patient safety will be evident through dedicated tracks exploring the latest standards and practices to prevent medical errors and enhance care delivery.

#### Showcasing advancements in various medical specialities

Arab Health 2025 will spotlight significant advancements in critical areas such as surgery, radiology, and infection control. Each specialty will feature dedicated sessions led by renowned experts who will share insights into the latest techniques and technologies that are setting new standards in healthcare. For instance, advancements in minimally invasive surgery and robotic-assisted procedures offer promising improvements in patient recovery times and surgical outcomes.

#### Continued on page 5

### A new era for Arab Health is about to begin

Be part of the future. 28.01.25.



## **Arab Health 2025 Floor Plan**



### Thank you to our partners



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### Today at a glance

Location	27 Jan	28 Jan	29 Jan	30 Jan	
<b>Conrad Dubai</b> Grand Ballroom - A+B+C	25th Total Radiology (CME)				
<b>Conrad Dubai</b> Grand Ballroom D	17th Obs & Gyn (CME)		16th Quality Management & Patient Safety (CME)		
<b>Conrad Dubai</b> Level 4 – Ballroom - E+F	24th General Surgery (CME)				
<b>Conrad Dubai</b> Level 4 - Ballroom - C+D	8th Emergency Medicine & Critical Care (CME)		2nd Infection Control (CME)		
<b>Conrad Dubai</b> Level 4 - Ballroom - A+B			2nd Decontamination & S	Sterilisation (CSSD) (CME)	
DWTC - Abu Dhabi B	9th Public Health (CME)		HAYAT - The annual Organ Donation and Transplantation Congress 2025 (CME)		
<b>DWTC -</b> Abu Dhabi A	Healthcare Leadership (CME) Samson Global Leadership Academy	EmpowHER Women in Healthcare			
<b>DWTC -</b> Bubble Lounge	Digital Health & Al	Healthcare Investment Summit			

#### Product Showcase

**Transformation Zone** Pavilion behind Hall 7

Korglutide: A New Breakthrough Sema/ Liraglutide Replacement Peptide for Weight loss

CareGen | 15.00

Transforming the Patient Journey: Enhancing Patient Experience and Productivity Technology

Innovaccer | 15.30

Innovation is not a spectator Sport – Getting Germany started on Telemedicine

Rudolph Riester | 16.00

Reimagining Healthcare: Al for Better Outcomes and Humanised Care Healow | 16.30

CME Conferences 👘 Healthcare Business Forums (non-CME)

#### **Transformation Talks today**

Expect innovative insights like never before, bringing you speakers from all walks of the healthcare landscape at the **Transformation Zone, behind Hall 7.** 

### Element of Healthcare Provider Transformation Journey at the age of AI: Saudi German Health UAE Case Study

Saudi German Health | 12:05

The "Saudi German Hospital UAE Transformation Journey" talk addresses the critical need for healthcare organisations to evolve amid rising cost stresses and the pursuit of profitability. Key topics include restructuring business units into independent Profit & Loss (P&L) segments, which fosters accountability and better financial management.

The incorporation of advanced tools, systems, and artificial intelligence is essential for increasing organisational capacity and optimising processes, ultimately enhancing service delivery. The talk emphasises reducing operational costs through lean methodologies, particularly in manpower and supply chain management. Effective relationship management with insurance companies and suppliers is also crucial for improving financial negotiations and ensuring a reliable supply chain.

However, technology implementation can present challenges, such as staff resistance, integration complexities, and the need for continuous training. The speaker stresses the importance of a flexible vision that can adapt to unforeseen changes in the healthcare landscape. This adaptability is vital for sustaining growth and profitability in a dynamic environment. The insights provided equip healthcare leaders with strategies to navigate these challenges, leverage opportunities for transformation, and ultimately enhance patient outcomes and operational success.



#### **Must-attend workshops**

Introduction to robotic surgery | American Hospital Dubai | 11.45

This workshop is designed to provide a comprehensive introduction to the field of robotic surgery. Through a combination of demonstrations, simulator sessions, hands-on practice, and a

round table discussion with robotic experts, participants will gain a thorough understanding of this innovative surgical technology. Location: Conrad Hotel - Level 4



#### Rackspace Technology | 12.30

In this talk, Keith Perry, Senior Vice President and Chief Information Officer at St. Jude Children's Research Hospital will be exploring the pivotal role of technology innovation in advancing the mission of St. Jude Children's Research Hospital. Discussing their transition to the Epic electronic health record system, which streamlines clinical workflows, improves patient care, and further enhances research. He will also showcase St. Jude Cloud, their robust data-sharing platform that empowers researchers globally with access to high-quality genomic data, accelerating discoveries and fostering collaboration.

Finally, he will share their global efforts, demonstrating how technology enables them to share knowledge, collaborate with international partners, and extend lifesaving treatments to children worldwide.

#### Panel

**President, EMEA** Peter Hall peter.hall@informa.com

Vice President Solenne Singer solenne.singer@informa.com

**Group Event Director** Sally Thompson sally.thompson@informa.com

Editor Farhana Chowdhury farhana.chowdhury@informa.com

VP Creative Solutions EMEA Mark Walls mark.walls@informa.com

Senior Graphic Designer Mohamed Nazeem mohamed.nazeem@informa.com

Senior Graphic Designer Nysam Shahul nysam.shahul@informa.com

**Content Marketing Manager** Karina Rapose karina.rapose@informa.com

Account Manager — Sponsorships James Murray james.murray@informa.com



## Digital Health is shaping the future of healthcare worldwide

The future of healthcare is here, and digital health is leading the charge.

#### BY Arab Health staff

he global digital health market is experiencing significant growth, with projections indicating it could reach a value of nearly US\$946 billion by 2030, expanding at a robust annual growth rate of 21.9 per cent. In the GCC, the sector is expected to grow by 15 per cent over the next two years, reflecting increasing investments and interest in digital health solutions. This growth is driven by the need for healthcare systems to overcome various challenges such as information gaps, miscommunication, and geographical and logistical barriers. Digital technologies are proving to be instrumental in solving these issues by enhancing data-sharing, improving communication, and creating more personalised patient care options.

#### Digital health technologies are already making an impact

Digital health technologies are already reshaping healthcare by integrating computing platforms and software to power telemedicine and electronic health records. Wearable devices like smartwatches and biosensors facilitate continuous health monitoring, allowing patients to track metrics such as heart rate and glucose levels while providing doctors with real-time data for personalised care. Additionally, 3D printing is revolutionising surgery by creating customised prosthetics and implants, while AI and machine learning are transforming diagnostics, treatment



#### The UAE as a leader of innovation

The UAE is at the forefront of digital health adoption in the Middle East. With the government's strategic focus on diversifying the economy through innovation, the healthcare sector has embraced digital solutions to improve care quality, reduce costs, and enhance patient experiences. Initiatives like the Dubai Health Authority's health information exchange platform and Abu Dhabi's Smart Health Strategy are paving the way for a digital healthcare ecosystem that is interconnected, efficient, and patient-centric.

Dubai, in particular, has become a hub for healthtech innovation, and will host DigiHealth 2025, a groundbreaking digital health event. **DigiHealth 2025** will be the world's largest gathering of digital health experts. Scheduled for September, the event will showcase cutting-edge technologies in healthcare, ranging from AI to wearable health devices, and provide a glimpse into the future of medicine. The event aims to bring together over 300 exhibitors, 3,500 visitors, and more than 100 global experts to share insights and drive forward-thinking discussions about the future of healthcare.

#### Investment and cost factors

The rapid evolution of digital health technologies also brings up critical questions regarding investment and cost. While digital health solutions offer substantial long-term savings by improving efficiency and reducing hospital readmissions, the initial investment in these technologies can be significant. However, as the market matures and economies of scale come into play, the costs of many digital health tools are expected to decrease, making them more accessible to healthcare providers worldwide.

Startups and investors are key drivers of innovation in this sector, with funding opportunities available for those who bring novel solutions to the table. The DigiHealth 2025 event will also serve as a key platform for connecting investors with highpotential startups, helping to drive further growth and advancement in the sector.

#### A future-ready healthcare system

As the world continues to embrace digital health, the next few years will see rapid advancements in the technologies that drive patient care. The integration of AI, wearables, and interconnected health systems promises to create a future where healthcare is more personalised, accessible, and efficient. For the UAE, its leadership in embracing and implementing these technologies positions it as a model for other nations to follow.

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#### VISIT US AT BOOTH H3, F10 AT ARAB HEALTH 2025







#### Continued from page 1

#### Fuelling innovation via Innov8

A highlight of Arab Health 2025 will be the Innov8 competition, which has become a cornerstone for fostering innovation and entrepreneurship in the healthcare sector. This competition invites startups to present their cutting-edge solutions that tackle pressing healthcare challenges. Innov8 serves as a platform for emerging entrepreneurs to gain visibility, secure funding, and receive mentorship from industry leaders, potentially accelerating the adoption of groundbreaking technologies in healthcare.

**Celebrating collaboration and leadership** 

Arab Health 2025 will serve as an international hub for healthcare professionals, industry leaders, and policymakers to network and collaborate. The event is set to feature over 40 country pavilions, over 3,800 exhibitors, and attract over 60,000 delegates from around the world. This extensive gathering facilitates the sharing of knowledge, strategies, and experiences, fostering global partnerships that will shape the future of healthcare.

#### Public health and the broader healthcare ecosystem

In line with its theme of comprehensive

healthcare evolution, Arab Health 2025 will also focus on public health issues, highlighting the role of healthcare systems in combating noncommunicable diseases through preventative care and public awareness campaigns. Additionally, the event will explore the integration of healthcare services, from primary care to specialised medical treatment, ensuring a seamless patient journey through the healthcare system.

#### A look ahead

As we celebrate half a century of Arab Health, the 2025 edition is poised to not only reflect on the achievements of the past but also pioneer the innovations that will lead us into the future

of healthcare. With a special focus on AI, digital health, sustainability, and global collaboration, Arab Health 2025 is set to be a pivotal event that will continue to drive the industry forward, ensuring that the next 50 years are even more progressive than the last.

Arab Health 2025 is more than just a conference; it is a movement towards a healthier tomorrow, fuelled by innovation, led by pioneers, and dedicated to improving lives across the globe. This landmark event is a must-attend for anyone involved in the healthcare industry, offering unparalleled opportunities to engage with the latest trends, technologies, and thought leaders shaping the future of health.



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## Transforming healthcare: GCC's medtech growth through innovation

The GCC's healthcare sector is rapidly evolving, driven by advanced technologies like Al, robotics, and telemedicine. With rising health demands and government-backed initiatives, the region is poised for significant MedTech growth, enhancing accessibility and quality of care while positioning itself as a leader in innovation by 2030.



BY Srinath Venkat and Sowmya Srinath

he GCC's healthcare sector is expected to grow from US\$72 billion in 2024 to US\$106 billion by 2030. The ageing population, increasing incidence of non-communicable diseases, rising costs of treatment, and medical inflation are driving the current health expenditure in the region which is projected to reach US\$160 billion in 2030. The population above 65 years is set to more than double by 2050, and the region is undergoing a rapid transition in disease profile with a greater burden of chronic diseases. GCC countries, in collaboration with private institutions, are ramping up investments in advanced technologies such as robotics, telemedicine, and Al to improve healthcare delivery and disease management. Technology integration in care delivery by public and private health systems is likely to spur inclusivity, accessibility, affordability, and growth in the healthcare sector.

#### Government initiatives to improve digital infrastructure and adoption of emerging technologies

The MedTech sector in the GCC region is expected to grow from US\$13 billion in 2024 to US\$18 billion by 2030. The region's advanced technological framework supports rapid adoption, positioning company) to administer AI training to healthcare professionals.

#### AREAS OF OPPORTUNITY

#### **Robotics technologies**

The GCC region, with its diverse healthcare landscape and increasing burden of complex medical conditions, stands to benefit greatly from the adoption of robotic technologies. Although primarily adopted in surgery, this cutting-edge technology offers a range of advantages that can significantly enhance care delivery and improve patient outcomes across various medical specialties. Bahrain is investing in initiatives to implement robotics to deliver nursing care, disinfect potentially hazardous areas, transport medicine and move heavy medical devices in



Sowmya Srinath

hospitals. The number of robotics companies registered in Saudi Arabia surpassed 2,300 in 2023 to meet the increasing demands of healthcare robotics. The Emirates Health Services Corporation is committed to utilising advanced robotics for surgical procedures and aims to advance its artificial intelligence capabilities. This initiative aligns with the UAE Government's goals to position the nation as a regional hub for Aldriven robotic surgery.

#### Virtual care

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The GCC region is experiencing growing demand for post-acute long-term care due to a shortage of healthcare professionals, inadequate bed capacity, and a rising senior population. The increasing requirement for out-of-hospital care is likely to propel the acceptance of virtual care models and



Srinath Venkat

remote patient monitoring technologies within the region. Saudi Arabia's Seha Virtual Hospital (the world's largest virtual care hospital) provides virtual services to over 200 hospitals around the Kingdom, including critical and urgent care, medical support, home care services, and medical consultations. The introduction of the Smart Digital Health regulatory framework by the UAE is fostering the uptake of remote services for patient monitoring and consultations. The UAE is the first country to appoint an AI minister globally, and it has partnered with Care AI to leverage generative Al, offering access to a "smart" virtual care nursing platform. Bahrain has widened access to telemedicine and remote consultations, via integrated mobile apps (BeAware and Sehati).

#### Al integration into care delivery

The market size of AI applications in healthcare in the GCC region is expected to surpass US\$1 billion by 2030 growing at an impressive rate of over 30 per cent. As a part of the value-based care strategy, several countries in the GCC region are adopting AI in diagnostic and clinical workflow, decreasing administrative burden and improving operational efficiency. With largescale government investments. Al is poised to transform the healthcare delivery in the region and Al's contribution to the GCC economy is expected to surpass US\$300 billion by 2030. Saudi Arabia has invested US\$100 billion to develop a robust AI ecosystem and establish itself as a major player in Al, data analytics, and advanced technology. The Saudi Data and Artificial Intelligence Authority (SDAIA) has been leading efforts to incorporate AI into healthcare services, particularly in diagnostic radiology and personalised health planning. Similarly, UAE has launched several initiatives to support the broader adoption of AI in healthcare as part of its UAE Artificial Intelligence Strategy, which aims to make the country a global leader in AI by 2031. The UAE's AI CoE initiative focuses on enhancing healthcare capabilities through Aldriven analytics and decision-making tools.

the GCC as a leader in MedTech innovation. Technologies such as AI and robotics are being integrated across services to effectively predict, prevent, and manage health conditions.

Governments in the region are increasing their healthcare spending and launching initiatives to adopt new technologies. UAE has introduced several programs to expand AI in healthcare such as the AI CoE, and digital twin projects with over US\$300 million in investments to enhance precision medicine and personalised therapies. In 2023, Saudi Arabia allocated over US\$50 billion for healthcare initiatives, including digital health services to enhance accessibility and transparency. Saudi Arabia's National AI Strategy 2031 is accelerating AI adoption across its hospitals by partnering with MedTech companies. In 2024, Abu Dhabi's Department of Health launched the Global AI Healthcare Academy by partnering with Mohamed Bin Zayed University of Artificial Intelligence and Core42 (an AI solutions



6

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MONITORING & OPTIMIZATION Adapt strategy to changing market

dynamics and unearth new opportunities



PLANNING & IMPLEMENTATION Execute strategic plan with milestones, targets, owners and deadlines GO-TO-MARKET STRATEGY Translate strategic alternatives into a cogent strategy

OPPORTUNITY EVALUATION

Conduct deep, 360-degree analysis of prioritized opportunities

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Srinath Venkat is a Senior Consultant, and Sowmya Srinath is the Director, Growth Advisory, Healthcare and Life Sciences at Frost & Sullivan.

## Happiness is an inside job

Reconnecting with your inner self through small, intentional steps can unlock greater joy, purpose, and mental clarity - leading to a more fulfilling life.

#### BY Maya Ghosn Bichara

n an increasingly digitally connected world, we've never been so disconnected. Loneliness is at an all-time high across cultures, communities, and countries. When we think of loneliness, many of us think about isolation from social groups and communities – but we forget that loneliness also stems from isolation from oneself.

In today's modern world that prioritises glorifies convenience over experience, productivity and hustle, monetises our attention through notifications and ads, and teaches us to ask ChatGPT how to manage our feelings, it's no wonder so many of us have lost our connection to ourselves and that the mental health epidemic continues to grow despite receiving increasing resources, time, and attention.

If this resonates with you, I've outlined four simple steps you can take this week to transform your relationship with yourself, and, in doing so, unlock greater joy, purpose and connection in your life.

#### Step one: seize your mornings

Seize your mornings. This practice is about prioritising yourself first by literally putting yourself first as your day begins. When you wake up, don't check your phone until you've checked in with yourself. For me, that means starting my morning with a brief meditation on Insight Timer, and a few minutes of journaling before I open any device. How many times have you opened an email or message first thing in the morning only to feel triggered, guilty or insecure about something that came up?



Maya Ghosn Bichara

That feeling immediately puts you in a position of shaping your mood and self-worth based on somebody else's agenda, action or message instead of based on how you want to be feeling.

#### Step two: journal

Journal. Write things down. This is so simple but so powerful. Reflect on your day - reflect on what felt good, and what didn't. Reflect on what you're grateful for. The more you do this, the

more you notice patterns within yourself and limiting beliefs that you have the opportunity to change. The journaling could be about anything that was top of mind or top of heart for you but the point of it is making the space to actually listen to yourself – and to value what you have to say or have to think. The more you do this, the more you'll re-connect with how you feel today, and understand how to create a better feeling tomorrow.

#### Step three: shifting perspective

Change the way you look at things and what you look at will change - because what you believe, you will receive. Our brains are incredibly powerful tools. But one major thing they cannot do is distinguish between a real event - something that actually happened to you - and your fears or imagination - something that hasn't actually happened (yet). Our brains react to both the same way and treat them as a "truth", and then find a way to make it real for you. So, take the time to think about what you think about, because your obsessions become your possessions.

#### Step four: choose the right words

Choose your words wisely because your word is your wand. For example, decide to stop saying "I have to" or "I need to" and instead use "I get to" or "I have the opportunity to". For example, instead of saying "I need to respond to Maria on that proposal" or "I need to read more" you can say "I get to respond to Maria on that proposal" and "I have the opportunity to read more". Do you see how that feels different? Suddenly, you're playing a more active, empowered role in your story. You're the author, and you are faced with boundless opportunity and choice - rather than being the victim of duty and endless to-do's.

> Maya Ghosn Bichara is the Operating Partner at the Bridge Builders Collaborative, Riyadh.





## From seeking alpha to seeking business: how to de-risk your startup launch

BY Pilar Fernandez Hermida

rab Health will hold the Innov8 competition, where 24 exciting startups will pitch their innovative ideas to a panel of judges with a wealth of industry knowledge and expertise. Beyond winning the prize or not, what makes a company investible?

Health tech is a tough market. Never has it been easier to launch a business. Never more difficult to succeed commercially. Products that are needed are not easily adopted or paid for at scale.

Why is that? How can startups and investors de-risk this journey?

#### The innovation paradox

What do entrepreneurs build a product or a business? A tsunami of health tech products has hit the market powered by access technology and funds. Despite the current momentum, very few companies become viable businesses.

Lack of commercial innovation is plaguing most companies.

Founders bring to market a product that solves somebody else's problem. However, a founder's main problem is to build a viable business. This is the innovation paradox.

The process of translating a product into a business is the go-to-market or commercialisation strategy. Getting it right is hard.

If your team doesn't have commercial expertise, you risk missing the biggest picture: the one with money on it.

#### Why most start-ups fail

The current market is saturated with too many offerings, yet immature regarding business models. De-risking your launch is essential. After working with hundreds of startups, here are two key questions:

#### Are you needed?

In that market, segment, or business wrapper. There are about 320,000 digital health applications available: are they all needed? Make sure there is a market waiting for you.

How can you make money in a replicable way? It is not so much about product-market fit, but about distribution, pricing and time fit. A few examples:



Cell and Gene Therapies (CGTs) are needed. Yet, with prices going up to US\$2 million per dose, who picks the bill?

Digital Therapeutics (DTX) are reimbursed in Germany and France, yet wide adoption is not happening. The main hurdle is distribution: convincing doctors to prescribe them will be generational.

Al business models are even more esoteric. Once you dig out who is making money from the GenAl/Al hype, most winners are "picks and shovels" such as Nvidia or Microsoft, along with their supply chain.

In a market where all products look the same, the real differentiation is how you make money.

#### Bottom line: it is about the bottom line

Health tech is ushering a new era of care, but the market needs time to figure out how to pay for novel treatments and medicines. Meanwhile, companies need to buy time and focus on the bottom line. What does this mean?

If you are a founder, how can you build a revenue-making business model? If the market isn't ready, how can you buy time?

If you are a hub or venture builder, how can you shift from an accelerator to a market maker? Sheraa in Sharjah is doing a great job by incorporating commercial experts into their programs.

If you are an investor, market due diligence goes beyond the technology acceptance model (TAM) hypothesis and other general assumptions. Do you have commercial experts with a track record? We conduct commercial due diligence for investors, and it is tricky.

#### From seeking alpha to seeking business

In a market where money was cheaply available, the ecosystem lost sight of its business North Star. Along the way, they also forgot to upskill a new generation of entrepreneurs in business innovation. Founders should never forget that their most important investor is the customer. They will not ask for equity, term sheets, or anything else. You just need to meet their needs on their terms. The rest, including investors, will follow.

Ultimately, adoption is not a technology issue but a human one, including business. It is about the right use case, at the right price, for the right market, and with the right business wrapper. That makes the Go to Market strategy.

In 2025, let's move from building products to building businesses.

Pilar will be part of the jury during the Innov8 competition. She will release Cash or Crash: How to Launch your Health Tech Business... Successfully in 2025.

> Pilar Fernandez Hermida is the Founder of i-Expand and a Commercial Strategy Expert.





Pilar Fernandez Hermida



8



## New Launch



## A Digital Health Event in Dubai

8-10 September 2025 - DWTC Visit our stand C.C129 - outside Hall 8

## Can Al transform healthcare for longevity?

The demand for solutions to promote longer, healthier lives is intensifying as global populations age. Artificial intelligence is leading the way in revolutionising healthcare, offering groundbreaking tools to predict, prevent, and treat age-related issues, while global innovations further reshape how we approach longevity and healthspan.

BY Harish Consul

s global populations age, the demand for solutions to extend healthy lifespans has never been greater. Advances in artificial intelligence (AI) and global innovations are at the forefront of transforming healthcare, offering groundbreaking tools to enhance longevity and improve healthspan. This piece explores how AI and other global advancements are reshaping healthcare to address the challenges of ageing.

#### Predicting and tracking ageing with AI

Al is revolutionising our understanding of ageing by identifying biomarkers – biological indicators that reflect a person's true age, rather than just their chronological years. Using machine learning, Al analyses data from genetics, health records, and lifestyle factors to predict diseases such as Alzheimer's, cancer, and cardiovascular conditions. Al-driven "ageing clocks" offer a more accurate measure of biological age, allowing for earlier intervention and personalised prevention strategies.

#### Real-time health monitoring and early detection

Wearable devices like smartwatches and fitness trackers are integral to transforming healthcare for longevity. These devices collect real-time health data, which AI algorithms use to track vital signs, sleep patterns, and activity levels. AI can detect heart irregularities or unusual changes in activity that may signal early health problems. Continuous monitoring allows individuals to make proactive health decisions, reducing the risk of chronic diseases and optimising healthspan.

#### **Personalising healthcare**

Al enables personalised health plans tailored to an individual's unique genetics, lifestyle, and health history. Al-powered apps can create customised fitness regimens, dietary plans, and mental health strategies. By analysing a person's data, these tools help optimise longevity through lifestyle changes that are specifically suited to the individual's needs, making interventions more effective.

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#### Smart healthcare environments and digital health platforms

Smart healthcare environments and digital health platforms are revolutionising care for ageing populations. Al-enabled sensors in smart homes track movement, detect falls, and automate tasks, helping individuals maintain independence and safety. Countries like Japan are developing "smart cities" to support ageing citizens. Likewise, telemedicine platforms expand healthcare access, particularly in underserved areas, by enabling remote diagnoses and continuous monitoring. Al integrates into these platforms to offer personalised care, improving efficiency and reducing in-person visits.

#### The future of AI and global innovation in longevity

Al and global innovations are reshaping healthcare for longevity, offering personalised, precise solutions that address ageing-related health challenges. As technologies like quantum computing and gene editing continue to advance, Al's role will only grow, accelerating breakthroughs in longevity. Collaboration across sectors and nations will be crucial to ensuring that these innovations are accessible to all, creating a future where extended lifespans are paired with extended health.

Harish Consul is the Founder and CEO of Ocgrow Ventures.

Al is also transforming cognitive health for ageing populations. Al-powered cognitive training apps offer mental exercises designed to improve memory and brain function, while virtual assistants provide companionship and reminders, helping individuals with early signs of dementia. Al technologies offer personalised care plans, supporting those with cognitive decline and improving their quality of life.

#### Regenerative medicine and biotechnology

Beyond AI, global advancements in medicine and technology are accelerating progress in longevity science. Innovations like stem cell therapies, gene editing (e.g., CRISPR), and tissue engineering are pushing the boundaries of longevity. AI optimises these therapies by analysing genetic data and predicting the outcomes of treatments. AI helps refine gene-editing techniques to repair or replace damaged tissues, rejuvenate organs, and even reverse some effects of ageing.





Harish Consul



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H6.A30, Hall 6

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### **Mission critical: purposeful deployment** of digital health tools

As healthcare evolves into the digital age, the challenge lies in deploying technology that truly benefits clinicians.

#### BY Anne Forsyth

s Satya Nadella, CEO of Microsoft, aptly noted, "Every company is becoming a digital company." Healthcare is no exception. Processes are being digitised, with new technological solutions emerging at a pace that far outstrips the ability of end users to adapt. However, deploying technology in the healthcare industry presents a unique challenge: its end users - clinicians - operate in highly complex environments and face unparalleled cognitive demands

#### The cognitive overload of clinicians

Consider this: the amount of medical knowledge clinicians are expected to master doubles every 73 days, according to the National Institutes of Health. On top of this, they must navigate an ever-expanding array of digital tools, including advanced medical devices, diagnostic platforms, therapeutic technologies, electronic health records (EHRs), and Al-driven decision support systems. The result? A cognitive overload that hinders their ability to focus on patient care.

In the information age, where knowledge flows faster than humans can process, many clinicians seek simplicity. A walk through a hospital reveals paper instructions and posters everywhere - workarounds to make digital tools functional. A quick read through any healthcare journal illustrates the frustration clinicians feel towards their digital tools. These observations beg the question: what are we doing wrong?

#### The mistake of replicating the paper world digitally

We are still trying to replicate that which is familiar: by recreating the paper world in the digital world. Digital health is a profession that straddles healthcare and IT. Though relatively new, our common responsibility unifies us across organizations in public and private sectors, multinational institutions, and startups: to simplify and automate processes by codesigning user-friendly digital solutions with clinicians and training them on the proper use of these solutions. In other words, purposeful deployment.

#### The need for purposeful deployment and training

While perfection is unattainable because healthcare systems are inherently complex and burdened by legacy challenges, we can continue



podcasts, and searchable audio clips tailored to clinicians' needs are the way forward. These bitesized resources, available at their fingertips, help clinicians learn what they need, when they need it, without adding to their already overwhelming workloads. This approach has proven effective in other parts of our lives, with many of us turning to memes that teach us how to use everyday gadgets more efficiently or DIY videos that empower us to tackle home repairs previously left to professionals.

Reimagining our support models can also

significantly enhance clinicians' experience with digital tools. With AI becoming increasingly prevalent, we have a low-risk, high-value opportunity to leverage it to provide better support. Imagine a 24/7 virtual assistant with deep knowledge of a tool's features, personalised to an individual's usage patterns, offering seamless and courteous support whenever needed.

#### The path to purposeful technology deployment

Being purposeful about our technology

deployments can turn our digital tools into the assets they should be rather than the burden that they currently are - so digital health can take its rightful place in healthcare's critical mission to save and improve lives.

> Anne Forsyth is the Director, **Clinical Applications and Decision** Support at the Women's College Hospital, Toronto, Canada.



to move the needle on reducing clinician burnout if we think differently and creatively about how we carry out our role as digital health professionals. Purposeful deployment of technology in healthcare should start by fixing redundancy in process. Every deployment is an opportunity to eliminate burden and streamline work for clinicians. Technology should serve as a catalyst for greater efficiency, not a simple digitisation of longstanding practices that do not serve the strategic goals and vision of an organisation.

Once digital tools are in place, it is important to train constantly and innovatively, to ensure the tools are being used as intended. Traditional training methods - dense eLearning modules, sprawling manuals, and tip sheets - are relics of the past. Today's solutions must be accessible, consumable, and just-in-time.

#### Innovative training and support models

Micro-training formats like short videos,







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CD38 Inhibitor	Rheumatoid Arthritis	FIC	Pre-Clinical Phase 1	Phase 2	
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Plasmalogen	Dementia	FIC	Pre-Clinical	Phase 1	Phase 2

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## All eyes on improving infant health in Saudi Arabia

Reducing infant mortality rate calls for a comprehensive approach from investments and workforce training to localised research and evidence-based clinical interventions.

**BY** Jan Schmitz-Hubsch, Partner, and Arianna Espinosa, Senior Manager at Strategy& Middle East, part of the PwC network

A ational transformation programmes and policy reforms in the Middle East have prioritised enhancing healthcare systems to ensure accessibility, ascertain costeffectiveness, improve life expectancy and overall quality of life. One crucial indicator of a nation's health, social stability, and economic development is infant mortality. Currently, Saudi Arabia has an infant mortality rate (IMR) of 5.1 infant deaths per 1,000 live births, placing it 63rd out of 253 countries globally. By comparison, developed G20 countries like Japan and Italy have the lowest IMRs of 1.6 and 2.2, respectively.

While the Kingdom has made significant progress in healthcare delivery and outcomes, there remains an opportunity for the country to continue improving and position itself as a leader in infant health. By implementing a comprehensive set of interventions during the next 15 years, Saudi Arabia could lower IMR by 50 per cent and could save 7,500 to 9,000 infant lives. <sup>[1]</sup> That would elevate Saudi Arabia to be among the top 20 countries globally in terms of IMR, to a more vibrant and stable society while advancing the Kingdom's Vision 2030 goals of improving health outcomes and increasing life expectancy.

Lowering IMR would also help grow Saudi Arabia's economy by increasing its workforce and productivity. The economic value lost per death is estimated at more than SAR 9 million <sup>[2]</sup> indicating significant long-term economic gains. In addition, implementing evidence-based care measures to reduce preterm births could improve health outcomes while lowering healthcare costs. This is especially important, as treatment costs for preterm low-birth weight infants can be 30 to 100 times higher than for full-term infants.

Reducing IMR calls for a comprehensive approach encompassing healthcare investments, workforce training, regulatory interventions backed by scientific studies, localised research and innovation, and evidence-based clinical interventions. Deploying real-time monitoring and evaluation systems to track progress and adjust as needed will be critical to success.

#### Four interventions have proven effective:

• Antenatal screenings: Antenatal care including regular screenings delivered by trained



the body temperature of newborns who have experienced hypoxic-ischemic encephalopathy (damage to the brain caused by a lack of oxygen) has been shown to reduce infant mortality by 36 per cent.

• Postnatal home visits: Regular monitoring and support during the critical early days of life are paramount for infants and mothers. Receiving the first postnatal care visit within two days of birth has been associated with 64 per cent lower mortality compared with those who did not receive a visit. Home visits promote breastfeeding and proper infant nutrition and reduce the risk of postpartum complications.

Saudi Vision 2030 aims to increase life expectancy, improve healthcare services, achieve long-term population health goals and elevate the Kingdom's position in global well-being indices. A targeted focus on reducing IMR supports all four.

The scientific evidence supporting the recommended clinical interventions is clear, and the potential for saving lives is enormous. By

prioritising these measures and ensuring their adoption, Saudi Arabia can make significant strides toward a healthier, more prosperous future for all its residents.

#### References

 Strategy&'s proprietary model for infant mortality rate reduction calculation
"Human Life Value" method calculation for Saudi Arabia

healthcare providers increases the likelihood that potential complications will be identified early, allowing for timely medical intervention. Neonatal mortality decreases by 34 per cent in mothers who attend regular screenings.

- Maternal supplementation: Research shows iron and folic acid supplementation during pregnancy can reduce the risk of infant death by 34 per cent during the first 11 months of life. This simple yet effective measure ensures that both mother and child receive essential nutrients for a healthy start to life.
- Care immediately after birth: Delaying cord clamping by just two minutes has been found to reduce the risk of death before discharge for premature babies by 66 per cent. Promoting skin-to-skin contact, known as kangaroo mother care, has been associated with a 51 per cent reduction in mortality among infants with low birth weight. Additionally, neonatal cooling therapy, a treatment that involves cooling



Jan Schmitz-Hubsch

Arianna Espinosa



## Pioneering a new era of women's voices in STEM

Initiatives promoting gender equality and innovative policies are transforming laboratories into inclusive spaces for women in science.

#### BY Dr. Malathi Arshanaplai

n the UAE and the Middle East, empowering women in laboratories is not just a trend; rather, it is becoming an essential aspect of our society. The region is making significant efforts to advance gender equality in STEM fields – science, technology, engineering, and mathematics. Thanks to numerous initiatives and legislation aimed at fostering an equitable environment for female scientists, we have observed notable shifts in the treatment of women in laboratories in recent times. In a culture where traditions can shape career paths, these empowerment efforts do more than just promote gender balance – they fuel innovation and drive global progress.

Consider the UAE, for example. Did you know that its rate of female STEM engagement leads the MENA region? Women make up an astounding 56 per cent of STEM grads. This accomplishment is a tribute to leaders such as Sarah Al Amiri, the Minister of State for Advanced Technology of the UAE. Her experience demonstrates what women may do when provided with the necessary resources and support.

#### The power of mentorship

One of the most powerful ways to uplift women in labs is through mentorship. Imagine if a young researcher and an accomplished female scientist have an association that has the power to transform everything. Formal mentoring programmes offer women significant support in navigating certain problems, such as managing research projects and striking a balance between work and family. Additionally, there is a sense of support and camaraderie among women in the lab sciences who belong to a network. Consider the case of Dr. Maryam Al-Mansoori. She was first a mentee and is currently in charge of the Biotechnology Research Center at Khalifa University. Her experience serves as a potent reminder of the life-changing potential of mentoring.

#### Other approaches to empower women

We may also encourage possibilities for professional growth tailored especially for female lab workers. Consider workshops on negotiation, career progression, and leadership development as instruments to assist women in moving up the corporate ladder. Attending international conferences helps you become more visible and expands your network in addition to learning. To ensure that women receive the credit they deserve, lab leaders should encourage women to discuss their work and submit funding applications.

Additionally, family friendly policies play a crucial role in supporting women scientists. Generous maternity leave, flexible work schedules, and on-site daycare can really make a difference. Consider a lab that runs a programme similar to Dubai Science Park's "Smart Lab, Smart Family," which provides lactation rooms and lab areas that are conducive to parent-child interaction.

The retention rates of women in lab roles have increased dramatically as a result of these measures, which enable mothers to pursue their careers without compromising their family lives.

Taking Middle Eastern culture into account is crucial while implementing these empowerment programmes. Respecting traditions while pursuing advancement is essential. Establishing womenonly lab spaces is one creative strategy, especially in areas where gender-segregated surroundings are the norm. For example, the Women in STEM Initiative at Saudi Aramco has created lab coats that can fit over abayas and added prayer rooms. These changes demonstrate how labs can foster inclusivity while honouring cultural and religious values, allowing women to fully engage in their scientific work without compromising their beliefs. We must get started early in order to really

empower the next generation of women scientists. Outreach education aimed at young girls is essential for long-term transformation. Labs can provide mentorship and internship opportunities by collaborating with academic institutions. These experiences help girls see themselves as potential scientists by exposing them to the scientific method at a young age. The "Girls in Science Initiative" of the Sharjah Research Academy is an excellent illustration of how outreach can spark interest in STEM among young women.

Additionally, laboratory leadership needs to actively encourage equality. Lab directors can

ensure that women are evaluated equitably by fostering inclusive cultures and putting in place merit-based advancement schemes. Equal access to resources and blind evaluation procedures for research proposals aid in levelling the playing field. Moreover, lab managers should recognise the achievements of female scientists and inspire them to communicate their findings to the public.

#### Keeping track of progress

We must assess our progress in order to ensure the effectiveness of these empowering techniques. We can get useful information to guide our future efforts by keeping track of important indicators, such as the proportion of women in leadership positions and the quantity of publications by female scholars. Frequent evaluations, such as focus groups and satisfaction surveys, assist labs in identifying areas for development and adjusting to the changing needs of their personnel.

#### Conclusion

We can be sure that as more women assume leadership positions and produce ground-breaking findings, science will flourish, and the future will be brighter with their full involvement.

> Dr. Malathi Arshanaplai is the Group Chief Medical Officer and Group Chief Quality Officer at Aster DM Healthcare.



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## **Bridging gaps in women's** healthcare with AI innovation

Artificial intelligence is revolutionising women's healthcare by addressing long-standing disparities, from underrepresentation in clinical trials to gender-specific health risks.



#### BY Philippe Gerwill

omen's healthcare has historically been underrepresented, leading to disparities in care and treatment outcomes. However, AI offers unprecedented opportunities to address these gaps, making healthcare more inclusive, efficient, and personalised.

To bridge the gaps in women's healthcare, it's crucial to understand the existing disparities:

Underrepresentation in clinical trials: Women are often underrepresented in medical studies and drug trials, leading to a lack of data on how women respond to certain medications. This results in suboptimal treatment or the need for trial and error to find effective therapies

Overlooked gender-specific health risks: Healthcare providers may not be aware of the unique health risks women face, such as cardiovascular disease, endometriosis, and menopausal complications. These conditions have not received adequate attention in medical research and practice.

#### The role of AI in bridging these gaps

Al can address gender-based disparities in healthcare in several ways.

#### Improved diagnostics and predictive analytics:

- Al can analyse vast amounts of data from electronic health records, wearables, and medical imaging to identify trends and make predictions
- detection of conditions that Early disproportionately affect women, such as breast cancer, ovarian cancer, and autoimmune diseases
- Personalised treatment plans based on a woman's unique genetic makeup, medical history, and lifestyle.

#### Reducing bias in medical decision-making:

- Properly designed AI algorithms can help eliminate human bias in medical decisionmaking
- Ensuring AI models are trained on diverse datasets that include both men and women to offer more equitable care.

issues related to conditions like PCOS, and provide timely interventions tailored to women's unique experiences and needs.

• Al-powered mental health apps analyse user behaviour and mood patterns to detect signs of mental health struggles, helping women access care more quickly.

#### Additional considerations

To ensure that AI solutions are effective globally, especially in diverse parts of the world, several additional factors must be considered.

#### Women's health stigma:

- Cultural norms around modesty and silence on reproductive health issues can prevent women from seeking medical attention.
- An AI doctor for women's health can provide private, anonymous consultations and advice to reduce stigma

#### Reluctance to visit gynaecologists:

• Cultural norms and lack of education prevent women from seeking regular check-ups or

by addressing data privacy and ethical use of technology

 Educating communities about the safety, accuracy, and privacy of Al-based healthcare platforms.

#### Multigenerational and intersectional approach:

- · Considering the specific needs of ageing women, marginalised groups, and those living in poverty to ensure no one is left behind.
- Targeting both rural and urban areas, as well as specific populations like immigrants, indigenous groups, and low-income women.

#### Cultural competence in health education:

- Tailoring health education materials, resources, and communication to the specific cultural. religious, and societal norms of each region.
- Ensuring solutions are culturally sensitive and delivered in ways that resonate with local populations.

#### The path forward

While AI holds immense potential to bridge



Philippe Gerwill

18

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Al in reproductive health:

- More accurate diagnostics and personalised treatment options for conditions like infertility and Polycystic Ovary Syndrome (PCOS).
- Predicting effective fertility treatments and tracking menstrual cycles to detect irregularities, enabling early intervention.

#### Telemedicine and remote monitoring:

- Al-powered virtual assistants, like an Al doctor for women's health, provide immediate access to healthcare advice, eliminating the need for long-distance travel for basic consultations.
- Continuous monitoring of vital signs and health metrics through wearables, which are particularly useful for managing chronic conditions.

#### Supporting mental health:

• Al can help identify early warning signs of mental health disorders, such as postpartum depression, perinatal anxiety, and body image

#### screenings.

· Consultations with female virtual assistants or practitioners can help bypass this reluctance.

#### Cultural challenges and societal norms:

- Strong cultural beliefs shape access to and perceptions of healthcare.
- Incorporating local traditions, languages, and values into healthcare solutions to ensure cultural sensitivity.

#### Barriers in rural and underserved areas:

- Rural areas face severe infrastructure issues that limit access to healthcare services.
- Ensuring technology-based innovations work in low-resource settings and partnering with local governments or NGOs to facilitate access to mobile clinics.

#### Trust in AI and technology:

Building trust in Al-driven healthcare solutions

the gaps in women's healthcare, challenges remain. Collaboration between AI developers, healthcare providers, and policymakers is essential. Healthcare professionals need to embrace AI as a tool to augment their capabilities. Researchers must continue to focus on creating AI solutions tailored to the unique needs of women. incorporating diverse datasets and addressing women's health from a holistic perspective.

In conclusion, AI has the power to transform women's healthcare by addressing long-standing gaps. By embracing AI innovation and considering cultural, societal, and systemic barriers, we can create a future where women's health is a priority. leading to better outcomes for women globally.

#### Philippe Gerwill is a Digital Healthcare Humanist, Futurist, and AI Pioneer.



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### **Exploring the impact of cultural** competence on healthcare outcomes

Cultural competence is crucial in healthcare, driving both patient satisfaction and improved outcomes. By understanding and respecting diverse cultural needs, healthcare providers can build trust, improve communication, and tailor care plans. This piece explores how cultural competence enhances care, focusing on its impact, assessment, and actionable steps for success.

BY Dr. Khaliq Siddiq

s someone deeply committed to improving healthcare for all, I've seen firsthand the transformative power of cultural competence. In today's healthcare landscape, it's clear that understanding and respecting cultural differences is a necessity. For business leaders, investors, and industry innovators, embracing cultural competence is a key driver for both patient satisfaction and health outcomes.

#### The importance of cultural competence in healthcare

Cultural competence in healthcare is all about meeting patients where they are. It means understanding their social, cultural, and linguistic needs, and tailoring treatment approaches accordingly. This is especially important for patients from diverse backgrounds, like those in Asian communities. Engaging patients can be tough, and without culturally appropriate

forget dietary needs. Meals should respect their preferences, and grocery benefits should include ethnic supermarkets that cater to their tastes.

#### Understanding cultural competence assessment scores

Cultural competence assessment (CCA) scores provide a comprehensive picture of how well cultural competence programs are meeting patients' needs by evaluating different dimensions of cultural competence. These scores drive performance improvement and better patient outcomes by measuring cultural awareness and knowledge, cultural skills (the ability to interact effectively with patients from different backgrounds), cultural encounters (the frequency and quality of interactions with diverse patients), and cultural desire (a genuine willingness to learn about different cultures).

Improvement in CCA scores directly reflects a program's impact on providers' increased selfawareness of their own biases and their effects on patient care, as well as enhanced knowledge of their patients' diverse backgrounds. Higher scores also indicate improved communication skills. as providers gain practical tools and strategies for effective communication. Additionally, they reflect a stronger commitment to cultural competence, showing a lasting impact of the training on providers' willingness to continue their cultural awareness journey.

cultural competence. Here are some steps and best practices to help you achieve and maintain high standards of cultural competence within your organisation:

- Review healthcare delivery network: Make sure your delivery network includes access to primary care physicians, specialists, and ancillary services capable of providing culturally competent care.
- Create an inclusive hiring environment: Encourage recruitment of a diverse workforce that reflects the communities served. Develop hiring practices that prioritise cultural competence and inclusivity.
- Develop member service centres: Establish member service centres staffed with a diverse team capable of interacting directly with members in their native languages. Go beyond relying solely on language interpreter services.
- Engage with community organisations: Partner with local community organisations, cultural groups, and advocacy groups. Create community centres where members can participate in

benefits of these initiatives. From increased patient satisfaction to reduced healthcare disparities, the evidence is clear: cultural competence makes a tangible difference. A recent study published in BMC Health Services Research highlights the effectiveness of cultural competence training. The study revealed significant improvements in CCA scores among healthcare teams post-training.

For those of us dedicated to healthcare excellence, embracing and prioritising cultural competence is a commitment to better care for all. By investing in comprehensive training, engaging in inclusive practices, and actively partnering with our communities, we can create a healthcare system that actively meets the needs of every patient. Let's continue to strive for a future where every patient feels understood, respected, and cared for.

Dr. Khaliq Siddiq is the Chief Medical Officer at Clever Care Health Plan.

healthcare, it's even harder. But when we speak their language, both literally and culturally, we build trust and satisfaction.

Treating patients in a culturally sensitive way improves communication, helps us make accurate diagnoses, and builds trust around the treatment plan. These plans should consider their ability to access care, refer them to specialists who understand their cultural context, and incorporate alternative therapies they might prefer, like herbal medicines, acupuncture, or chiropractic care.

For Asian communities, social and family dynamics are particularly important. Many senior patients want their families involved in healthcare decisions, so it's important to engage with their family members too. While technology can support communication, many senior patients still rely on their primary care physician's guidance. Therefore, all healthcare teams should coordinate closely with the primary physician to facilitate a more holistic healthcare experience. And let's not

#### Most importantly, enhanced CCA scores

have practical implications: improved patient satisfaction, better adherence to treatment plans, reduced healthcare disparities, and organisational benefits such as improved reputation, higher Stars and CAHPS scores, patient satisfaction, and patient retention.

#### Actionable steps for achieving and maintaining high CCA scores

To effectively address the diverse needs of patients, healthcare organisations must prioritise culturally appropriate activities and interact in their native language.

- · Practice patient-centred care: Tailor care to meet the specific needs of patients from diverse backgrounds. Respect the cultural preferences of patients in all aspects of care delivery.
- Utilise national standards and resources: Follow the National Culturally and Linguistically Appropriate Services (CLAS) Standards provided by the US Department of Health & Human Services for a comprehensive framework on culturally appropriate services. Consider training and consulting services from the Cross-Cultural Health Care Program (CCHCP) for cultural competence in healthcare, including interpreter training and workshops.

#### Improving CCA Scores – The real-world impact

The improvements seen in CCA scores following training programs underscore the real-world



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## UAE doctors lead fight against outdated medical practices

Doctors in the UAE are revolutionising healthcare by embracing modern, research-driven practices and cutting-edge technology. From personalised medicine to AI-powered patient care, these professionals are eliminating outdated methods and reshaping the nation's medical landscape, positioning the UAE as a global leader in innovation and patient-centric care.

BY Dr. Ksenia Butova

he UAE's healthcare system is undergoing a notable transformation, propelled by a new wave of medical professionals committed to improving standards and tackling entrenched inefficiencies. Their efforts, aimed at eliminating outdated practices, are driving the adoption of cutting-edge solutions and reshaping the sector into one of the most advanced globally.

#### **Evidence-based medicine**

Physicians in the UAE are embracing clinical research and contemporary data, rejecting reliance on outdated procedures and methodologies. The new approach is allowing them to prescribe treatments grounded in the latest scientific developments, ensuring better outcomes and higher patient satisfaction. For a sector often criticised for conservatism, the move towards research-driven care marks a significant shift and sets a new regional standard.

#### Tackling polypharmacy

Polypharmacy is an emerging challenge in global healthcare, where patients receive multiple, often unnecessary medications, leading to harmful side effects. UAE doctors are addressing this issue directly, focusing on rigorous quality control of prescriptions. Clinics have introduced systems where Al aids in reviewing medical reports, flagging potential over-prescription, and facilitating more informed decision-making. Detailed follow-ups can also ensure that treatments remain effective without unnecessary medical interventions.

#### Personalised medicine takes center stage

Rather than relying on one-size-fits-all solutions, UAE healthcare providers are developing treatment plans tailored to individual patients' genetic makeups, lifestyles, and health histories. This shift is particularly evident in oncology and cardiology, where precision medicine offers more accurate and effective care. The ability to treat patients based on specific biomarkers is transforming patient outcomes, placing the UAE at the forefront of medical innovation.



social media to disseminate valuable health information. Platforms such as Instagram and YouTube are now avenues where doctors educate the public on preventative healthcare, healthy living, and the importance of regular checkups.

#### Prevention rather than cure

Clinics are increasingly emphasising holistic health, focusing on lifestyle interventions and long-term well-being rather than reactive treatment. Personalised lifestyle recommendations, including nutrition and mental health support, are designed to keep patients healthy before illnesses emerge. A pivot towards comprehensive wellness marks a shift from traditional models of care, with far-reaching implications for public health outcomes.

#### **Medical tourism**

The UAE's reputation as a hub for medical tourism continues to grow, driven by its advanced healthcare offerings and global appeal. Patients from countries with less developed healthcare systems, including Russian-speaking countries, are traveling to the UAE for high-quality services such as vaccinations and specialised treatments. Dubai's medical facilities are becoming synonymous with cutting-edge technology, world-class care, and innovative approaches.

#### Doctors as innovators, not just practitioners

Medical education in the UAE now places a heavy

health challenges. Such an approach breaks away from traditional learning, fostering a culture of innovation where doctors are expected not only to adopt new technologies but to actively contribute to their development.

The nation's healthcare sector, once characterised by its adherence to global norms, is now establishing new benchmarks in medical practice. According to Statista, the UAE's digital health market revenue is expected to hit US\$487.3 million in 2024. The drive for innovation, coupled with a strong emphasis on patient outcomes, positions the UAE as a leader in the global healthcare landscape.

#### Technology is transforming the patient experience

Al-powered bots now assist patients in managing their care, sending reminders about medications, monitoring their daily habits, and providing realtime health insights. Digital assistants help patients take a more active role in managing their health, improving adherence to treatment plans. Meanwhile, virtual reality is enhancing the patient experience in more immediate ways. Virtual reality (VR) headsets are being used to ease anxiety during medical procedures, particularly for children. Immersing patients in a calming virtual world during treatments such as blood draws or vaccinations reduces stress and creates a more comfortable clinical environment.

#### Doctors as public health educators

Rather than confining themselves to clinical practice, many physicians have turned to



emphasis on interdisciplinary collaboration, where physicians work alongside AI experts, data scientists, and bioengineers to solve real-world

#### Dr. Ksenia Butova is the Founder of Molodost Clinic Dubai.



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## **Robotic surgery: A leap into** the future of healthcare

Robotic-assisted surgery is revolutionising healthcare by combining precision, innovation, and faster recovery times. With over 12 million procedures performed globally, this cutting-edge technology is transforming surgical practices across multiple specialities, offering patients safer, more effective treatments and setting new standards in medical excellence.



BY Dr. Salem Al Harthi

ver the last decade, Robotic Assisted Surgery (RAS) has emerged as a significant advancement in surgical practices, achieving remarkable milestones since its introduction. The completion of countless robotic surgeries worldwide highlights the effectiveness of this increasingly beneficial technology, while also demonstrating the increasing acceptance of robotics for surgical procedures among patients.

to advancing both training and innovation within the medical industry, ensuring practitioners remain at the leading edge of their specialist fields.

#### A patient case study

In a notable recent procedure at Sheikh Shakhbout Medical City (SSMC), a complex bile duct injury repair was successfully performed using RAS technology. The operation involved addressing complications related to gallstones and acute cholecystitis. By utilising advanced robotic technology, surgeons facilitated precise repairs through minimal incisions, significantly reducing recovery time and allowing the patient to return home shortly after, demonstrating the effectiveness of this approach.

#### Advancing patient-centric care

The commitment to personalised, patient-centred care is evident in the continuous investment in training and innovative technologies within the field of RAS. Indeed, specialists involved in



Dr. Salem Al Harthi

such procedures must actively participate in regular training to stay informed about the latest techniques, ensuring the highest quality of care. By focusing on continuous improvement and learning, healthcare providers demonstrate a broader determination to set new standards in surgical excellence.

#### The future of robotic surgery

As robotic surgery becomes integral to surgical offerings globally, the future looks promising. The number of robotic procedures performed, and the number of surgeons trained in these techniques are doubling annually, reflecting the growing demand for advanced surgical options and expertise in the field.

With continued advancements in capabilities and the establishment of new benchmarks in medical care, robotic surgery is poised to play a leading role in delivering next-generation, personalised care - across the healthcare landscape

> Dr. Salem Al Harthi is the Chair of the Surgery Department at Sheikh Shakhbout Medical City.

#### Pioneering a new era in surgery

Robotic surgery has transformed the surgical landscape, allowing for both enhanced precision and quicker recovery times - particularly in relation to highly complex procedures. The surge in robotic surgeries highlights a shift towards a new wave of innovation being adopted by the medical community, with over 12 million robotic procedures conducted, worldwide utilising intuitive robotic systems.

When first introduced, robotic surgery only featured across a limited number of procedures; however, today, it has rapidly expanded to include a diverse range of applications in multiple specialities. These include general surgery, gynaecology, urology, and thoracic surgery, among others.

Surgeons familiar and trained in RAS procedures acknowledge the clear advantages of technologically enhanced surgical support, noting that it enables them to perform highly intricate procedures with exceptional precision and control. The expansion of RAS also underscores a dedication





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## Embracing change: empowering women's health throughout menopause

Discover how informed choices can transform the journey of menopause.



#### BY Dr. Shahad Mahmoud

ypically occurring among women in their 40s or 50s, menopause is a significant life transition, officially diagnosed after 12 consecutive months without a menstrual period. With that, the marking of the end of a woman's reproductive years can manifest as a range of symptoms, including hot flashes, mood swings, and sleep disturbances.

While this natural process is part of ageing, it can bring a variety of emotional and physical symptoms that may impact daily life and overall well-being. In fact, nearly 63 per cent of women report their menopause experience as difficult or very difficult, highlighting the need for increased awareness and support during this transitional phase.

Most interventions for menopausal women have concentrated on encouraging healthy habits and behaviours, such as regular physical activity, balanced diets, effective stress management, and maintaining a consistent sleep schedule.

Empowerment for menopausal women also focuses on lifestyle modifications, as well as making informed choices and ensuring access to expert medical care. By understanding their physical and psychological needs, women can reshape their perception of this transition and place greater emphasis on self-care.



Dr. Shahad Mahmoud

#### Empowerment through knowledge and holistic medical care

Empowerment through knowledge and educating women about menopause symptoms and treatment options is critical. Resources such as websites, books, podcasts, and community support groups are invaluable during this transition.

By engaging in educational initiatives, women can proactively navigate their menopause journey and attend annual screenings that help to monitor their health and overall well-being.

In recognising the unique challenges that menopause presents, healthcare providers play a pivotal role in providing essential screenings and education initiatives, enabling women to take control of their menopausal health.

As a consultant in obstetrics and gynaecology at SSMC, I always emphasise the importance of a holistic approach in empowering women through menopause. By offering personalised treatment plans that combine medical care with knowledge such as nutrition counselling and mental health support, women feel fully supported throughout their menopause journey.

#### Looking ahead

Empowering menopausal women is crucial for ensuring their optimal health during this transformative stage of life. Menopause is more than just a medical transition; it represents a significant phase that requires comprehensive support.

By embracing an integrated approach that addresses physical health, emotional well-being and lifestyle guidance, women can validate their experiences and navigate this period with confidence. Armed with knowledge and support from healthcare professionals and the wider community, they are better prepared for the challenges and opportunities that menopause brings.

> Dr. Shahad Mahmoud is a Consultant Obstetrician and Gynaecologist at Sheikh Shakhbout Medical City, Abu Dhabi.

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### **Stress and unwanted mood states:** how can we manage our thoughts?

A "mind gym" combining brain-computer interfaces and virtual reality to train the mind for calm and clarity may be a solution for improved focus, well-being and mental resilience.



#### BY Dr. Jamil El-Imad

n our fast-paced, hyper-connected world, stress and mental health challenges have become increasingly prevalent. Many people find themselves overwhelmed from constant digital notifications, overflowing inboxes, and the pressures of daily life. I believe, the root of this issue often lies in our inability to manage our thoughts and focus our minds, resulting in stress, anxiety, distraction, and declining well-being.

#### The impact of mind-wandering on mental health

Research, such as the well-known Harvard study on well-being, reveals that our minds wander nearly 50 per cent of the time. Some of this wandering or 'day dreaming' is good for our brains. It fosters creativity and helps us find solutions to tough problems. However, there are times when we need to calm our minds down such as times of stress, anxiety, when we have a peak performance or when we need to sleep. Excessive mind wandering could lead to unwanted mood states. A distracted mind is an unhappy one. While technology has given

connectivity, it has also created powerful tools for interruption that are fracturing our focus. This is preventing many people from engaging deeply in tasks or relationships, fostering feelings of dissatisfaction and stress.

#### The need for focus

At the heart of this challenge is, in my view, a fundamental yet simple question: How can we take control over our thoughts like we control the movement of our arms and legs?

Focus is more than just enhancing productivity - it is the cornerstone of mental well-being. Studies consistently show that people are happier and more fulfilled when they are deeply engaged. Conversely, disengagement and mind-wandering often result in stress and unwanted mood states. Given the neuroplasticity of our brain, training our mind to focus will without doubt help improve wellbeing. We need to train how to focus. We need a mind gym. Everyone agrees that physical exercise improves physical and to a degree mental fitness. Equally, mental exercise will improve mental fitness and can provide profound mental health benefits and

#### A mind gym: the solution to focus training

I've been working on the problem of building a mind gym for over a decade now. I wanted to create a device that trains people to be more focused, encourages intentional awareness of the present moment and helps navigate stress, anxiety, and self-doubt by teaching people how to take control of their own thoughts. While mindfulness meditation is of great help, it's easier said than done. Focus training, in my view, goes one step further especially if the method allows for an instant feedback loop when attention control is lost.

The solution I've designed combines a Brain Computer Interface (BCI) and a Virtual Reality (VR) headset along with novel feature extraction and filtering algorithms that can read brain signals in real time and determine the user's state of mind. It combines advanced signal processing with virtual reality to create a "mind gym" to train people how to stay calm and focused in a gamified, immersive environment.

#### A gamified approach to mind control

The BCI component monitors brain activity in real

An example of an experience is where the user is teleported with virtual reality to an island shrouded in fog. By relaxing and concentrating, the fog clears and reveals the island's beauty. When the device detects the mind wandering the fog returns. At the end of the session which normally lasts between five to 10 minutes, the user receives a score. Over time and by regular training, a few times a week, the score significantly improves. This gamified approach makes focus training enjoyable and fun. The aim is to empower people to take control of their own thoughts

#### Versatile applications and future potential

The mind gym can be made available in corporate settings, to train employees how to have thought control and avoid burnout. Obviously, focus not only helps to manage stress and improve wellbeing but it also enhances productivity and is extremely important in mission critical work!

It can be made available in fitness centres to provide a total solution combining physical and mental training. In the healthcare environment, it has potential uses for pre-surgery preparation, post-surgery recovery, and pain management, demonstrating its versatility in improving mental and physical well-being.

#### A step toward a more resilient future

The rise of stress and unwanted mood states in modern society calls for innovative solutions. This approach is one solution which represents a step forward in tackling this. I was delighted when the device was featured on BBC News; "Training Your Brain To Relax On A Virtual Island" and in the recent book by best-selling author Bernard Marr, titled, "Extended Reality In Practice: 100+ Amazing Ways Virtual Reality Is Changing Business and Society". I was equally delighted when I was invited to present the research work at a TED event in Switzerland.

It's worth noting that wellness is key to performance and resilience is key to prevention. Mastering our thoughts, in a world where interruptions are constant, is key to strengthening our mental resilience and improve our general wellbeing

> Dr. Jamil El-Imad is a Senior Research Fellow at Imperial College, and a Digital Healthcare Consultant.

time and provides feedback to the VR system.



Dr. Jamil El-Imad





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## Enabling remote paediatric examination with telehealth

As telehealth continues to reshape healthcare, its potential to enhance paediatric care is undeniable. This piece explores the key features paediatricians should look for in telehealth platforms, from high-quality video conferencing to AI tools, and how these innovations can ensure effective remote examinations for children.

BY Mariia Kovalova

irtual care rose to popularity at the beginning of 2020 and remains a vital part of healthcare in developed countries today. According to the American Academy of Paediatrics, telehealth has the potential to address disparities in access to care for children and adolescents, which makes it a critical initiative for the healthcare industry.

While some paediatricians hold consultations over the phone, this mode of communication is more suitable for triaging. In the meantime, paediatric telehealth platforms are a much better option for providing comprehensive medical services, including remote patient examination, making correct diagnoses, and prescribing treatment or scheduling an in-person visit. In this article, we will explore what capabilities paediatricians should be looking for in their telehealth solutions.

#### High-quality video conferencing

Visual observation and communication with a patient are key activities at any doctor's visit. The visual component becomes even more vital with young children, as they often can't properly communicate with a medical professional verbally. Thus, doctors must have a clear view of the patient during the virtual visit to see the patient's facial expressions, movements, and the coloration of their skin, eyes, nails, and mucous membranes in detail.

While the characteristics of a patient's camera and their internet connection certainly influence video quality, so do various types of video codecs and streaming protocols used by the telehealth software. Healthcare organisations that want to keep paediatric services accessible without compromising their quality should opt for a telehealth platform that can provide high-quality video streaming even on low-bandwidth connections. Thus, paediatric care providers should look for telehealth software with efficient video compression, latency management, and bandwidth prioritisation capabilities.

#### **Store-and-forward features**

The high-quality image exchange functionality in paediatric telehealth apps is essential for



examination or a conversation. However, this data needs to be easily accessible to paediatricians working with the telehealth platform, so they can view all the patient's health information in one place. Therefore, paediatric care providers should prioritise telehealth platforms that can be integrated with the most common smart medical devices like thermometers or blood pressure monitors.

On the other hand, not all medical devices are smart and can be integrated with a telehealth platform. For such cases, the solution should feature self-service capabilities for caregivers to log their device's measurements.

Depending on the child's age, smartwatches can become a valuable asset to track vitals such as heart rate, sleep patterns, and walking steadiness. To have access to these metrics in real time, paediatricians should make sure their telehealth platform is easily connected to smartwatches.

#### Integration with specialised medical

to patients when needed.

Smart portable otoscopes and rhinoscopes are becoming widely used during telehealth appointments, especially in paediatric practice. These devices don't require much training from parents, don't cause discomfort to children, and are usually connected to the teleheatlh applications. Thus, parents only need to insert the device into their child's nose or ear, and it will automatically send high-quality video or pictures to the doctor through the telehealth platform.

Blood glucose meters are necessary to properly examine a child who has confirmed diabetes or is at risk of developing this condition. Modern meters automatically check patients' blood glucose levels throughout the day and send data directly to the mobile app in real time, so the doctors and caregivers can track the patient's dynamics.

Another example of useful telehealth devices are dermascopes that help examine skin when a high-resolution photo or video is not enough for conclusive diagnostics. Paediatric dermatology live video and photos submitted by patients, performing more in-depth medical image analysis and picking up details that a paediatrician missed.

Additionally, intelligent chatbots can be integrated into the telehealth application to assist medical professionals during a remote exam. They can suggest open-ended questions to ask the patient or their caregiver in the popup window during a video consultation or message exchange. Additionally, AI tools can then analyse the conversation and ensure that the paediatrician conducts the virtual session according to the protocol.

#### A word about challenges

Like any other technology, telehealth has limitations and thus cannot replace in-person paediatric care. First, the efficiency of virtual

cases when video conferencing is impossible or insufficient for proper visual observation. For example, to thoroughly examine a child's rash, a doctor can ask for high-resolution pictures of the skin taken from different distances. Such pictures can reveal more details than what can be observed during a video conference, even with a good camera, which is essential for an accurate diagnosis. Also, since image transfer requires less data than video streaming, it allows doctors to examine patients who have poor internet connection.

Thus, while video calls are usually preferable, audio communication supplemented with highquality photos would still be more useful than audio-only consultations.

#### Integration with common medical devices

Medical devices are essential for gathering patient information that can't be acquired via a visual

#### 30 (f) /arabhealth

#### devices

For telehealth to be as effective as in-person health visits, paediatricians need to be able to diagnose rare conditions during a virtual visit. Visual observation, conversations with patients, and primary vital signs measurements are not enough to diagnose some ailments. Therefore, additional equipment is sometimes necessary for in-depth remote examinations.

Although paediatric telehealth services providers can rely on parents to purchase the needed medical devices, such an approach would hinder the accessibility of telehealth. To ensure that every household has the equipment for an in-depth physical exam, paediatric care providers can supply such equipment on a rental basis: sending it to the patients' families by post on the condition that they return it the same way. Medical devices required for examination vary by paediatric subspecialty, but it's recommended to have the following equipment on hand to supply it specialists providing virtual consultations often mail their patients portable dermascopes that need to be put over the smartphone's camera. A patient or their caregiver can photograph moles, freckles, warts, or other skin lesions through the dermascope to effectively treat problems like acne or rule out skin cancer and other similarly dangerous conditions. Patients simply mail the dermascope back if no critical issues are detected but keep the device if further observation is required.

#### Availability of AI tools

Al has proved to be a highly valuable technology for medical diagnostics. For example, a recent study showed that oncologists who use Al to analyse medical images detect signs of cancer more frequently and at earlier stages than their colleagues.

Al-powered analytical solutions can be integrated with telehealth software to process



Mariia Kovalova

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