

Together for a healthier world



Artificial Intelligence, Robotics and Global Collaboration Thrive at Arab Health 2024

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Introduction

The world of healthcare is ever-evolving, and with the advent of artificial intelligence, robotic medicine and powerful generative computing as well as its penetration into everyday decision-making in healthcare, innovation is constant and expected.

It was in this environment of healthcare expectations that the Arab Health 2024 Exhibition was held from January 29 to February 1, 2024, at the Dubai World Trade Centre. The exhibition marked its 49th year in the global healthcare landscape, and once again was the largest gathering of healthcare and trade professionals in the MENA region, with this year's event showcasing an impressive array of over 4,150 exhibiting companies, welcoming over 50,000 attendees from 191 countries. The exhibition provided a platform for industry leaders, healthcare professionals, and innovators from the UAE, KSA, the wider GCC and the Middle East, as well as the rest of the world to converge, share knowledge, and explore the latest advancements in medical technology and healthcare services.

Arab Health showcased not just products and services but also provided a hub for scientific discussions, industry-defining business transactions, and networking opportunities. Attendees represented key figures from government entities and hospitals, followed by dealers and distributors from myriad healthcare sectors. The event also facilitated the negotiation and signing of contracts, highlighting its role as the pivotal marketplace for the global healthcare industry in the region.

In addition to the exhibition, Arab Health 2024 featured a series of business, leadership, and Continuing Medical Education (CME) conferences aimed at bridging gaps in medical knowledge. The sessions provided over 3,000 attendees with the latest updates and insights into cutting-edge procedures, techniques, and skills, catering to professionals from various sectors of the healthcare, medicine and life sciences.

An important segment of the exhibition was the innovative Transformation Zone as well as the Smart Hospital and Interoperability Zone, and Start-up Zone, offering digital health disruptors, cybersecurity, and AI solution providers a chance to

showcase innovations they believe will reshape healthcare. The Future Health Summit, an exclusive event focusing on "Reverse ageing and longevity", was held alongside the show, and brought together senior government officials and CEOs to discuss revolutionary advancements in healthcare, all under the partnership of PureHealth.

"Arab Health 2024 exceeded expectations both in terms of an event and in the way that it delivers value to the global healthcare industry. We welcomed over 57,543 healthcare professionals from 191 countries, with over US\$2.46 billion of business generated across the four days. We saw global product launches, numerous MOUs and agreements being signed, and business transactions happening across the show floor. About 3,304 conference delegates were able to hear about the latest trends, topics and revolutionary technological advancements for their specific speciality as part of our 10 CME-accredited conference programmes, and our Transformation Zone gave visitors the opportunity to discover dynamic insights, and innovations as well as look at the revolution of healthcare through our Transformation Talks, Innov8 Talks competition and Product Showcases." - **Ross Williams**, Senior Exhibition Director, Healthcare, Informa Markets



"Participating in this important platform annually provides an opportunity to showcase and highlight the exceptional projects that distinguish Emirates Health Services and its achievements throughout its journey. It also serves as a chance to learn about the best global practices, transfer knowledge, exchange pioneering expertise, and enhance local and international partnerships, which are fundamental pillars for improving the quality and standard of services provided by EHS. This requires continuous adaptation to the innovative advancements offered by modern technologies, contributing to shaping the future of the healthcare sector and supporting efforts to enhance community health."

H.E. Dr. Yousif Mohammed Alserkal
Director-General of Emirates Health Services

Smart Hospitals

Innovations in smart hospitals are revolutionising patient care through the integration of advanced technologies, offering hyper-personalised, efficient, and safer healthcare experiences.

The UAE is no stranger to this innovative method of healthcare delivery, as prominent organisations such as Sulaiman Al Habib Hospital, RAK Hospital, American Hospital and others are constantly using advanced technologies to automate the delivery of care, from surgical support and diagnostic tools to advanced treatment prediction engines and digital twin readings.

Surgical robots, heavily exhibited by a range of vendors at Arab Health 2024, represent a major leap forward, acting as extensions of surgeons to perform less invasive procedures through smaller incisions. These robots are becoming increasingly capable thanks to advancements in AI, soft robotics, and 5G technology, potentially enabling remote surgeries and expanding access to specialised care. Moreover, medical equipment is becoming safer and smarter, with enhanced imaging quality and robust cybersecurity measures to protect sensitive patient data. The UAE Ministry of Health, for example, is focused on automating the blood collection and diagnosis process at its clinics for medical certification for residence permits, and Emirates Health Services (EHS) was a magnet for visitors as they displayed their extensive robotic and intelligent health systems at their stand. The advent of AI and machine learning is improving diagnostic accuracy and treatment plans by analysing vast datasets and recognising patterns, which can lead to early detection of conditions and better patient outcomes.

The physical infrastructure of hospitals is transforming as well to accommodate modern healthcare challenges. This year, Aster DM Healthcare, a leading hospital chain in the UAE, will open a new multi-speciality Medcare hospital. The Medcare Royal Hospital, scheduled to open in the first quarter of 2024, is being built to meet the growing demand for advanced quaternary care such as transplants, cancer treatment, and robotic surgery. The group also intends to open new specialist centres and provide tertiary and quaternary treatment in its existing hospitals. In addition to primary care medical specialities, the new Aster Royal Clinic will have in-house comprehensive diagnostic facilities, niche medical services, digital dental scanning, super speciality offerings, and extensive aesthetic services such as laser hair removal, botox, fillers, platelet-rich plasma, and mesotherapy.

These developments are a focused and determined shift towards smart hospital ecosystems where technology, data, and patient-centric design converge to optimise healthcare delivery.



“Arab Health isn’t just an event; it’s a pivotal moment for healthcare. We are thrilled to be a part of this dynamic platform that brings together the brightest minds, policy drivers, and healthcare professionals from around the globe. Dedalus is dedicated to shaping the future of healthcare, and Arab Health provides the perfect stage to showcase our latest innovations.”

***Sam Amory
Managing Director at Dedalus***





Immersive Healthcare

Immersive healthcare, particularly Augmented Reality (AR) and Virtual Reality (VR), is experiencing breathtaking advancements focused on enhancing medical training, surgical precision, and patient care.

Arab Health 2024 featured many players providing immersive solutions, which is expected considering a recent McKinsey & Company study, which predicted the digital health market in KSA and UAE will reach US\$4 billion by 2026, driven by teleconsultation and online services. PwC reports indicate a strong endorsement of the metaverse and immersive healthcare among GCC healthcare professionals (84%) and patients (nearly 60%), highlighting its potential to improve patient experiences.

In medical education, AR and VR technologies are transforming traditional teaching methods by providing interactive and immersive learning experiences. Medical and nursing students are exploring detailed 3D models of human anatomy and practice complex medical procedures in a risk-free virtual environment, reducing errors and improving outcomes. Johns Hopkins School of Nursing, for instance, has implemented VR training across various levels, focusing on critical care areas such as resuscitation and acute-care management. This allows for a deeper understanding of procedures and decision-making in real time. This digital evolution, incorporating VR and AR, not only makes healthcare more accessible and efficient but also introduces novel treatment and wellness methodologies, establishing the Middle East as a frontrunner in healthcare innovation.

"I had the honour of seeing firsthand at Arab Health 2024 the revolutionary potential of immersive reality in healthcare,

especially when viewed through the lenses of augmented and virtual reality in addition to cutting-edge Web 3.0 technology. In addition to marking the beginning of a new age in patient care and medical education, the integration of these instruments represents a major advancement towards a healthcare ecosystem that is more technologically sophisticated and interconnected. The technologies on display, ranging from realistic surgical simulations to all-encompassing virtual patient exchanges, hold the potential to completely reshape the landscape of medical education and patient involvement. This will guarantee the provision of more individualised, cost-effective healthcare in the future." — **Sukhmeet Panesar**, Chief Health Officer @Monstarlab

Under the theme "Innovating for Your Health, Excelling with You", Emirates Health Services (EHS) displayed its revolutionary 'Clinic in a Box', a psychological therapy using virtual reality technology that immerses patients in a 'safe space' virtual 'true reality' environment to test their reaction to stimuli and thereby build mental defences over time, overcoming their phobias.

The SEHA Virtual Hospital in Saudi Arabia, the world's largest virtual healthcare facility, epitomises this advancement by providing telemedicine services and utilising AR for live surgical support. Similarly, the UAE Ministry of Health and Prevention is integrating VR into rehabilitation programs for various neurological and developmental conditions, highlighting the region's commitment to leveraging immersive technologies in healthcare.

Innovative Technologies

Arab Health 2024 maintained its position as a watershed event for healthcare innovation, with a range of new technologies, inventions and breakthroughs being showcased during the event.

Robotics

A significant focus at the event was on the evolving role of service robots within healthcare, particularly in hospital care. The Camello+ and the Transcar robot, developed by OTSAW, were showcased, highlighting their potential to streamline hospital operations and enhance patient care. These robots are designed to address common challenges in hospitals, such as the timely delivery of meals to patients and the transportation of heavy loads across hospital facilities. The Camello+'s battery life lasts up to eight hours, and Ling Ting Ming, Founder and Chief Executive of Singapore's OTSAW, aims to sell 1,000 robots to hospitals around the world this year.

Agilis Robotics displayed its groundbreaking advancements in endoluminal surgery, which focused on the development of highly miniaturised and flexible robotic instruments offering exceptional dexterity within challenging anatomies, allowing surgeons to perform intricate tissue resection procedures with precision and ease through natural orifices. This technology enhances the scope of endoluminal surgeries across various medical domains, including the gastrointestinal and urinary tracts, throat, and gynaecology.

IoT In Diagnostics

The ArcBox made its debut at Arab Health as a device that enhances interoperability among critical care medical devices by providing vendor-independent connectivity without the need for middleware. This results in real-time data

flow, reducing irrelevant alarms and enabling better clinical decisions. By leveraging IoT technology, ArcBox allows seamless communication between devices, leading to faster, more efficient care and a significant reduction in connectivity costs.

Sterilisation

Operating theatres and wound care rooms, no matter how sterile and uncontaminated, can always find some form of cross-contamination simply within the confines of the air and the initial touch of hands to gloves when putting them on. IGIN, debuting at Arab Health, showcased their revolutionary, sterile device that puts the gloves onto the wearer in a closed, sealed environment where no contamination can occur, reducing the risk of tears and wastage and enabling considerable savings for hospitals.

Instant de-contamination

e4life displayed its tiny, portable sanitising devices which can fit around a wearer's neck and create a protective safety cloud around them which sanitises the area they are in instantly. Activated with a single click and having a standard charging port, the electromagnetic field it generates is for those who need to work in contaminated spaces that have the potential to contain known pathogens, such as in hospitals and clinics as well as operating environments.

The device also comes in a larger format which can be placed in hospital rooms and other medical facilities where air contamination by pathogens needs to be mitigated. The device is placed on a wall in a central location that then uses its technology to uncontaminated the vicinity required around a patient, making it one less thing to worry about for care staff.





NICUs and Neo-Natal Solutions

With recent innovations within Neonatal Intensive Care Units (NICUs) and neonatal centres, technological advancements and novel therapeutic approaches have significantly enhanced patient care and outcomes. Paediatric healthcare, including that within neonatal care, has seen a broad range of innovations across various subspecialties as well.

Positioned within the Healthcare Transformation sector, the Smart Hospital and Interoperability Zone at Arab Health 2024 featured four demonstration rooms, including a labour, delivery and neonatal room, where visitors had a step-by-step overview of new technologies utilised during birth, including electronic foetal monitoring, ultrasonography, blood pressure screening, and maternal/foetal pulse oximetry. Each room in the zone featured state-of-the-art neo-natal technologies from companies such as Baxter International, a global leader in medical equipment manufacturing; Nihon Kohden, Japan's leading manufacturer of medical electronic equipment alongside giants GE Healthcare and Nasco Healthcare.

Among the technologies to watch were integrated, HD webcams in NICUs facilitating remote monitoring and allowing parents and families to maintain a visual connection with infants even when not physically present. This innovation supports emotional bonding but also aids in reducing stress and anxiety associated with neonatal hospitalisation.

The global neonatal and prenatal care market is experiencing significant growth, driven by various factors including rising preterm birth rates and increasing awareness of neonatal care. In 2022, the market was valued at US\$7.68 billion and is projected to grow at a CAGR of 6.35%, reaching US\$11.13 billion by 2028.

The surge in preterm births globally necessitates the need for specialised neonatal intensive care units (NICUs) equipped with state-of-the-art equipment, highlighting the critical role of technological advancements in this sector, something the 2024 edition of Arab Health made sure was a key feature of this year's presence. These innovations not only enhance the diagnostic and treatment capabilities within neonatal care but also drive the demand for sophisticated medical devices, thereby fuelling market growth.

In neonatology specifically, continuous innovation has led to dramatic improvements in the care of premature and critically ill infants. These advancements have been instrumental in enhancing survival rates and quality of life for this vulnerable patient population.



“In partnership with Cleveland Clinic Abu Dhabi, the Smart Hospital and Interoperability Zone showcased the next generation of healthcare through enlightening demonstrations of innovative and sustainable technologies. These demonstrations highlighted how various technologies seamlessly integrated with state-of-the-art medical equipment to enhance patient care. Positioned within the Healthcare Transformation sector, the zone provided a platform for equipment manufacturers, e-health solution providers, and digital health disruptors to showcase their solutions to key decision-makers and professionals.”

Ross Williams
Senior Exhibition Director, Healthcare, Informa Markets

Remote Medicine

Remote medicine, telehealth, and telemedicine are transforming healthcare delivery, leveraging digital technology to provide medical services over distance. This shift is especially crucial in today's fast-paced world, where accessibility, efficiency, and the management of infectious diseases like COVID-19 are of paramount concern. Remote area healthcare provisions are of particular focus for the GCC and Middle East, where large swathes of land are mountainous, desert or simply inaccessible, yet feature thriving populations who require health and medical support.

Globally, the remote medicine market which was valued at US\$7.9 billion in 2021 is set to reach US\$23.9 billion by 2028. The UAE Telehealth market alone is projected to grow at a CAGR of around 25% until 2028. In recent years, the UAE has also emerged as a preferred destination for medical tourism, thanks to a world-class healthcare system, offering facilities that are quickly and economically accessible to citizens and residents. The UAE government keeps drafting robust regulatory frameworks to ensure patients' health by providing preventive care and improving patient care delivery. Systems like telemedicine, virtual care, and remote patient health monitoring have attracted substantial investments by Abu Dhabi's Department of Health (DoH), MoHAP, ADQ, Mubadala, and the Dubai Health Authority (DHA), focused on setting higher medical accreditation standards and innovating new medical techniques, including advanced diagnostics that detect and treat early chronic and lifestyle ailments.

The core value of telemedicine continues to lie in its ability to enhance healthcare location-independent accessibility and convenience. Patients can engage in consultations with healthcare providers from the comfort of their homes, eliminating the need for travel and reducing the risk of transmitting infectious diseases.

Recent innovations even allow for remote treatment and surgery. This is particularly beneficial for individuals living in remote or underserved areas, where access to healthcare facilities may be limited. Patients are already using web-based or mobile applications to transmit vital health data directly to their healthcare providers, enabling real-time monitoring and intervention. This remote monitoring extends to wearable devices that can track a wide range of health indicators, from blood sugar levels to physical activity, providing a continuous stream of data to healthcare professionals for better-informed decision-making.

The telemedicine landscape is continuously evolving in the region, with innovations enhancing its effectiveness and scope. Collaborative virtual consultations enable primary care providers to seek input from specialists in different locations, facilitating a more comprehensive approach to patient care. Patient portals and personal health apps further empower patients, allowing them to manage their health records, communicate with their healthcare providers, and track their health metrics more efficiently.





On-site Conferences & Industry News

Arab Health 2024 also brought together a range of healthcare thought leaders, innovators, and public sector authorities for conferences and seminars aimed at addressing regional healthcare challenges and showcasing the latest advancements in the sector for a global impact.

Over 3,000 visitors attended the sessions throughout the event, particularly the 10 CME-accredited conferences which offered KME-led insights into the latest in medical practice and healthcare administration, particularly from a public health angle.

The Future Health Summit stood out as the premier event, catering specifically to senior government officials and CEOs within the healthcare sector. With a focus on "Reverse Ageing and Longevity", the Summit highlighted groundbreaking developments in these areas, specifically in healthspan quality, lifespan increase and a promise to revolutionise health for all.

Drawing on Dr. Jose Cordeiro's statement at the Dubai Future Forum where he proclaimed that "anyone who is still alive by the year 2030 has a good chance of living forever", the Summit challenged the audience to rethink healthcare beyond traditional clinical settings, proposing a vision where healthcare is synonymous with extending quality life for all, not just the affluent.

"Longevity must be democratised" said PureHealth CEO Shaista Asif in her keynote. With 200 biotechs in this space attracting over US\$10 billion in investment, the field is burgeoning yet not oversaturated, presenting a prime opportunity for new entrants, something Arab Health 2024 is keen to explore further.

Additionally, the Healthcare World Stage brought together system leaders from across the region and world, including representatives from the Dubai Health Authority, Health Dubai, NEOM, NHS England, SEHA, M42, Pure Health, and more. A series of panel sessions provided a forum for discussing the most pressing issues facing healthcare in the country.

"Away from the exhibition floor, and with a focus on Reverse Ageing and Longevity, this year's Future Health Summit once again became the key meeting place for healthcare leadership to network and discuss the latest trends shaping tomorrow's healthcare landscape. Over 460 attendees witnessed cutting-edge research, innovative technologies, and progressive strategies aimed at extending the human lifespan and reversing the effects of ageing." - **Ross Williams**, Senior Exhibition Director, Healthcare, Informa Markets

Specialised conferences included the Surgery Conference and the Total Radiology Conference, which highlighted the latest advancements in each field, respectively. Of particular interest were the sessions on Public Health and Sustainability, featuring discussions on sustainable healthcare practices, with illustrative examples from organisations like the Abu Dhabi Department of Health and Emirates Health Services. The sessions, moderated by the International Hospital Federation, highlighted the significance of sustainability in healthcare and introduced the Sustainability Accelerator Tool (SAT) and the Carbon Emissions Learning Lab (CELL), aimed at educating and empowering healthcare professionals to implement sustainable practices.

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"This year we were quite happy to be able to bring an expert panel including some of our clients to talk about real-life experiences using Cloud and Artificial Intelligence to support better outcomes and clinical transformations. This is quite an amazing event. The show is incredible, and for a growing global company like Nordic International, it is very important for us to be here in this part of the world."

Terri LeFort
President, Nordic International

Industry Insights

Philips and Malaffi announced a collaboration at Arab Health 2024 to set global standards for healthcare image exchange. Malaffi, Abu Dhabi's first Health Information Exchange platform and part of M42, became a reference site for Philips' Image Exchange Solution. This partnership, an extension of their 2022 collaboration, enables the secure and seamless exchange of medical images across diverse healthcare facilities. By the end of the first quarter, the solution aims to connect all 67 facilities in Abu Dhabi, covering 100% of radiology images produced annually in the emirate, enhancing patient care and operational efficiency.

Dubai Healthcare Authority (DHA) also announced it had identified critical public health priority areas for 2024 and beyond, including significant investment in the science and treatment of genomes, mental health, occupational health, non-communicable diseases, pandemics, climate change, and people of determination. Dr. Ramadan Alblooshi, Senior Advisor to the Director General of Dubai Health Authority, stressed the importance of global public health partnerships, citing collaborations with the UK Health Security Agency, Centre for Disease Control and Prevention, and the Public Health Agency of Sweden.

Significant advancements in MRI technology were showcased, focusing on making scans more efficient and affordable.

Innovations like Siemens' virtually helium-free Magnetom Free Max scanner were highlighted for their potential to broaden patient access to this crucial diagnostic tool. The event also featured BrainCapture's EEG device, a user-friendly headset designed to expand access to brain scans by detecting electrical signals indicative of conditions like epilepsy.

A major initiative announced at Arab Health 2024 was MoHAP's Health Research Platform, a first of its kind in the GCC and Arab countries, aiming to provide data from reliable sources on a range of health research topics and fields. Data is automatically and interactively updated in real-time from information published by academic institutions, healthcare entities, and the private sector.

The Dubai Health Authority (DHA) introduced a 'Permit to Practice' at the event, allowing visiting medical professionals to work in Dubai for up to three months. This initiative aims to enhance the healthcare sector's capacity to manage emergencies and access specialised medical expertise. This move is part of DHA's efforts to equip the healthcare system for various demands and to integrate international professionals into local medical conferences and education, and will have a significant impact on improving healthcare delivery in the coming years in Dubai.

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“We were keen, first of all, to show our products at Arab Health to our partners, but we were happy to be in Dubai at this massive event. You just have to be here, but you also get great opportunities to announce plans for the future.”

Paraic Curtis
CEO, TSC Life, after the announcement of their merger during Arab Health 2024.

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“This (Arab Health) is a very important event for Emitac Healthcare Solutions, where we'd like to meet most of the KOLs who come to visit us. It's a great opportunity to meet our existing customers, as well as to present our new technologies to end users, giving them a highlight and then taking them to our workshops to make our business cases.”

Mohammed Kenanah
CEO, Emitac Healthcare Solutions

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“When we come to Arab Health, a lot of people are looking for new devices and innovations. For us this is one of the best places to showcase our new products. It's one of the best healthcare shows in the world.”

Himanshu Baid
Managing Director, Poly Medicure





Conclusion

Arab Health 2024 marked a significant milestone in the region's healthcare landscape, emphasising innovation, technology, and international collaboration but also focusing on future-proofing healthcare and embracing the science of longevity. With over US\$2.6 billion of business generated during the event, showcased were advancements across various sectors, including smart hospitals, immersive healthcare technologies, neonatal solutions, and remote medicine, reflecting the dynamic evolution of healthcare. The convergence of professionals, industry leaders, and innovators fostered an

environment geared towards knowledge exchange, business transactions, and the forging of new partnerships.

The exhibition's success, highlighted by significant business generated and global participation, underscores the vital role of Arab Health for the industry at large, as well as the region's practitioners and public health providers.

Be part of the healthcare transformation journey at Arab Health 2025 by [registering your interest now](#).

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