FROST & SULLIVAN

For Global Health Exhibition 2024

HealthTech in Saudi Arabia: Strides in Healthcare Intelligence and Information Management Driving Patient-centric Healthcare

Authored by: Sagar Mukhekar, Industry Analyst, Healthcare & LifeSciences, Frost & Sullivan

Saudi Arabia's Healthcare ecosystem is undergoing a radical transformation with an ever-growing focus on innovation and advancements in the HealthTech sector. Through its ambitious 'Vision 2030' initiative, the major objective is public health improvement along with amplifying the economic potential of the region's healthcare sector. The key priorities of this healthcare reform include establishing an efficient and accessible healthcare system, improving the health & well-being of the population, and attracting significant medical tourism opportunities with an ambition to become the leading healthcare market in the GCC region. The country has taken a multifaceted approach to march towards its goals focusing on digital health adoption initiatives, healthcare infrastructure for local as well as medical tourism, and public-private partnerships to drive the investments needed for these plans. Digital health transformation is the foundation of healthcare reform plans, and the integration of intelligent technologies such as AI/ML, automation for efficiency; healthcare information exchange and management for data-driven care delivery; and virtual/at-home care delivery technologies for patient-centric preventive healthcare will be critical part of healthcare strategies in the region.

KEY DIGITAL HEALTH AREAS FOR HEALTHTECH TRANSFORMATION

INTELLIGENCE-POWERED HEALTHCARE

Intelligent technologies such as artificial intelligence (AI), machine learning (ML), automation, Gen AI, and clinical decision support systems (CDSS) are leading the transformation in patient care outcomes and care delivery efficiency. Incorporating AI and automation into clinical and non-clinical administrative workflows will dynamically improve the allocation and utilization of healthcare resources, and aid in improving cost-efficiency and optimization of healthcare operations reducing manual labour. Current AI models could lower the annual healthcare expenditure by 5% to 10% in the next five years, by reducing administrative costs and simplifying existing processes.¹ Such a promising potential of AI in healthcare closely aligns with KSA's focus on establishing itself as a regional technology powerhouse and has driven significant AI-related developments in the country.

• Key Use Cases of AI in Healthcare

Clinical documentation	Triage and diagnosis	Preventive health and wellness	Clinical decision support	Care delivery	Chronic care management
Population health management	Administrative workflows	Care transition	Revenue cycle management	Education and training	Fraud prevention
Remote patient monitoring	Risk assessment	Diagnostics	Customer support (chatbots)	Claims management	Resource optimization

Hospitals in Saudi Arabia are implementing AI-powered platforms with predictive analytics capabilities for patient flow triaging and case management. For instance, King Faisal Specialist Hospital & Research Centre launched the 'Capacity and Command Centre', which utilizes AI and descriptive and predictive analytics for the better management of patient flow and volumes and to enhance patient experience and safety.

FROST 👉 SULLIVAN

For Global Health Exhibition 2024

Key Highlights

- Al development has become a national priority under the Healthcare Transformation Program's Vision 2030 and the National Strategy for Data and Al in Saudi Arabia
- Establishment of 'Centre of Excellence for Artificial Intelligence for Health Sector'.
- Cerner and American Hospital Dubai have launched the first AI research centre that focuses on enhancing the Remote Patient Monitoring (RPM) experience using connected devices.

Key Implications

- To cater to the staffing shortage, there will be increased investment in AI-powered solutions to ease administrative burden, automate nonclinical tasks, and improve resource utilization.
- The growing interest in AI will lead to new product launches and strategic partnerships among care facilities, and digital health companies, including healthtech vendors and AI players. The goal of these alliances will be to automate tasks in various organizations and integrate clinical and nonclinical data with social and behavioural data to generate insights that will help achieve improved care and efficiency.

HEALTHCARE BEYOND THE HOSPITAL WALLS

In the past few years, Saudi Arabia has seen strong advocacy towards the adoption of healthcare delivery channels beyond the four walls of hospitals including telemedicine, teleradiology, home-based care, as well as hospital-at-home. Telehealth has become an integral part of Vision 2030 and a key priority in subsequent strategies for KSA authorities. It aims to expand access to care for patients across urban and rural/remote geographies, address the healthcare workforce shortage, promote preventive healthcare, and contain the rising healthcare cost. According to a recent study on Globalization and Health by Lin et al., over 175,000 healthcare professionals will be in demand by 2030 in Saudi Arabia.

Saudi Arabia is at the forefront of embracing emerging care delivery models such as virtual hospital as well as hospital-at-home highlighting the long-term vision towards establishing a future-ready healthcare system. Partnerships and collaboration are increasing among healthcare players, for technology acquisition and implementation support to establish virtual and out of the hospital care delivery channels.

Key Highlights

- Tamer, the Middle East's leading healthcare distribution company, and Huma Health, a leading HaH technology provider, have partnered to establish the HaH model in Saudi Arabia utilizing Huma's HaH technology platform. This partnership aims to enable HaH access for over 34 million patients, initially supporting people with diabetes and cardiovascular diseases.
- The launch of SEHA Virtual Hospital considered as world's largest and Middle East's first virtual hospital. This virtual hospital caters to 12 specialties and 35 sub-specialties through connection with a strong network of over 130 hospitals.
- The KSA Ministry launched the Health Saudi Telehealth Network initiative to connect specialized healthcare facilities with primary care centers and hospitals from remote areas through telemedicine improving access and quality of healthcare services.

Key Implications

- More hospitals and health systems will use their alternative care sites to ensure that the patient flow remains within their network and that they have immediate access to a patient's medical and Social Determinants of Health (SDoH) data; this will help them optimize care delivery and improve care quality and patient experience.
- With the omnichannel experience, patients would also require assistance with care planning and care coordination, which will open new avenues for digital health vendors to partner with payers and providers.
- This will also lead to a gradual shift to centrally decentralized care delivery. As care delivery shifts to decentralized locations, command centres will be used more frequently to monitor patients and

FROST 👉 SULLIVAN

For Global Health Exhibition 2024

provide interventions, as necessary. In addition, this central workforce will be supported by nurses and providers from other parts of the country/network to ensure continuity of monitoring and care delivery.

ROBUST AND SECURE HEALTH INFORMATION MANAGEMENT

As healthcare moves outside the hospital system, the need to have an overall view of the patient becomes greater. Patients have access to care from different providers, each with their own set of electronic health records (EHRs) and data standards. Achieving population health management requires connecting all these data sources. With the myriad of healthcare data generated through various healthcare delivery channels and connected devices, the seamless exchange and management of this data is imperative to lead analytics-driven healthcare interventions. KSA region is well-aligned with this imperative having multiple healthcare information exchange, data security, and interoperability standards in place.

Key Highlights

- The Cooperative Health Insurance Council (CCHI) and the National Center for Health Information (NHIC) launched the National Platform for Health and Insurance Exchange Services (NPHIES). NPHIES is a secure and healthcare interoperability standards-compliant platform for healthcare information exchange for insurance companies and providers.
- Launch of Personal Data Protection Law (PDPL) aimed to protect the privacy of patient data and regulate its collection, processing, disclosure, or retention by organizations.

Key Implications

- Data has become a valuable commodity in the healthcare industry. By adhering to security and privacy laws, organizations can share data to increase utility. Providers need the ability to sync real-time data within EHRs to assist them in making informed decisions.
- The convergence of patient-centric and payor/provider-centric technology has expanded the realm of data available for health IT companies.
- Incorporating data standards in their daily workflows creates an extra step for healthcare organizations. This approach can lead to staff fatigue and revenue losses because of labeling errors.

CONCLUSION

Saudi Arabia is among the frontrunners progressing towards digital transformation in healthcare covering all aspects from technology to infrastructure to patient-centricity in their healthcare reform strategy through the balanced focus on AI, healthcare information exchange, and innovative care delivery models. Vision 2030 and associated initiatives encompassing regulatory, technical, and social aspects to establish the future-ready, sustainable, and efficient healthcare system marks its visionary position in not only GCC but the global healthcare landscape.

Sources:

¹Cutler DM. What Artificial Intelligence Means for Health Care. JAMA Health Forum. 2023;4(7):e232652. doi:10.1001/jamahealthforum.2023.2652; Ahmad Z. Al Meslamani (2023) Beyond implementation: the long-term economic impact of Al in healthcare, Journal of Medical Economics, 26:1, 1566-1569, DOI: 10.1080/13696998.2023.2285186; VoxEU Column

FROST & SULLIVAN

For Global Health Exhibition 2024

GROWTH PIPELINE ENGINE



Frost & Sullivan's Growth Pipeline Engine[™] supports clients through all 5 phases of growth:

from developing, evaluating, and prioritizing opportunities to building and implementing go-to-market strategies and optimizing opportunities. The objective of this study is to be a client's first step on a growth journey.

For More Information or To Speak to our Growth Expert, visit: https://frost.ly/8m