



2020 Digital Healthcare in North Africa

Report by

North Africa Health 

By Informa Markets

Together for a healthier world

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What is Digital Healthcare?

According to the World Health Organisation (WHO), digital health, or the use of digital technologies for health, has become a salient field of practice for employing routine and innovative forms of information and communications technology (ICT) to address health needs.

The term digital health is rooted in eHealth, which is defined as “the use of information and communications technology in support of health and health-related fields”. Mobile health (mHealth) is a subset of eHealth and is defined as “the use of mobile wireless technologies for public health”.

More recently, the term digital health was introduced as “...a term encompassing eHealth (which includes mHealth), as well as emerging areas, such as the use of advanced computing sciences in ‘big data’, genomics and artificial intelligence”.

“Harnessing the power of digital technologies is essential for achieving universal health coverage. Ultimately, digital technologies are not ends in themselves; they are vital tools to promote health, keep the world safe, and serve the vulnerable.”

**WHO Director-General,
Dr Tedros Adhanom Ghebreyesus**

Digital Health as a Transformation Agent

Digital health is a multifaceted field, much of which is made up of technologies and services that enable healthcare outside of traditional clinical settings. It follows a global trend in the healthcare industry of decentralisation to alleviate overburdened hospitals and clinics.

Digital health offers a solution to problems such as escalating healthcare costs, shrinking profit margins, increasing prevalence of chronic diseases and ageing populations suffering from chronic conditions. This, coupled with anticipated shortages of physicians and medical staff, will compel all industry participants to embrace digitalisation as the foundation of the next generation of patient access, clinical decision support, workflow management, and population health management.

For developing nations, this shift to embrace digitalisation of healthcare services will require a

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transformation in every part of the existing healthcare system – from providers to payers. And as Egypt begins the rollout of its health insurance system reform, and Morocco endeavours to execute a health insurance system that will cover approximately 90% of the Moroccan population by 2021, many North African countries are looking towards digital transformation to offer solutions for modernising their national health systems.

According to the U.S. Food & Drug Administration, providers and other stakeholders are using digital health technologies in their efforts to:



Reduce inefficiencies



Improve access



Reduce costs



Increase quality, and,



Make medicines more personalised for patients





Global Digital Health Industry Outlook

According to the Frost & Sullivan Global Digital Health Outlook 2020 report, the healthcare industry’s steady shift toward improved patient outcomes, cost containment, and value-based care is expected to drive the global digital healthcare market from an estimated US\$147 billion in 2019 to US\$234.5 billion in 2023.

As digital health grows, the need for cybersecurity will accelerate as well. Regulators in the

United States and other countries will impose hefty fines and penalties on those healthcare providers that do not adequately protect patient data from the constant threats to patient privacy and data security, the report continues. Femtech and digital therapeutics will also grow as opportunities in both medical-grade, and mass-market products and solutions offer new ways to manage health.

Value-based care is expected to drive the global digital healthcare from an estimated:



Top trends and drivers for the global digital healthcare market:

- The focus on offering valuable and improved services to the patients
- Increasing adoption of a more customer-centred business model
- The emergence of favourable government initiatives and funding options in various countries across the globe
- Increasing penetration of smartphones and other tech-enabled devices
- Consumer appetite for increasing amounts of personal health information
- Mounting adoption of various healthcare IT solutions by healthcare providers to meet the intensified regulatory requirements for patient’s care and safety

Source: Market Research Future



Which Digital Technologies are disrupting the North African Healthcare Market?

Artificial Intelligence (AI)

One of the key areas of advancement in healthcare is, of course, artificial intelligence (AI), which refers to intelligent applications that assist with the diagnosis of disease, treatment recommendations, as well as data management, improving online consultations, speeding up drug development, and improving doctor and medical student training.

Similarly, machine learning (ML) is an application of AI wherein the system looks at observations or data, such as examples, direct experience, or instruction, figures out patterns in data and predicts events in the future based on the examples that we provide.

According to an article published in the MIT Technology Review, which examined what AI means for Africa, needed and unmet care like diagnostics can be automated to cut down cost and also empower the few available health workers to do more. The article also highlighted that data analytics could be used to gather health data to accurately diagnose patients and provide precise treatment as part of evidence-based healthcare. And also, it would allow African countries to more accurately monitor population health and track early symptoms of outbreaks. This can guide evidence-based policymaking.

Egypt is aiming to have 7.7 % of its GDP derived through AI by 2030, according to the PwC report - The Potential Impact of AI in the Middle East. The Egyptian government has been investing in building AI capability in the country; developing a national AI strategy aimed at guiding development and research of the use of AI in priority areas including education, smart cities, healthcare, infrastructure and transport, among others.

Big Data

Over the last decades, there has been growing enthusiasm for the potential usefulness of these massive quantities of data, called Big Data, in transforming personal care, clinical care and public health.

In an article by Pastorino, R. et al., published in European Journal of Public Health, the authors describe the potential of Big Data in healthcare as relying on

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the ability to detect patterns and to turn high volumes of data into actionable knowledge for precision medicine and decision-makers. In several contexts, the use of Big Data in healthcare is already offering solutions for the improvement of patient care and the generation of value in healthcare organisations.

For the African region, despite the prevailing challenges and limitations, there is evidence that big data analytics has the capacity to transform the healthcare system in Africa. According to an article by Akinngbe, A. et al. published in the Global Journal of Health Science, preliminary application in the public health system, especially when epidemics happen, is proven evidence of its potential benefits in the African healthcare system.

Unfortunately, not much use and benefit have been reported in non-communicable and chronic diseases in Africa, unlike in developed countries. However, with an increase in the use of mobile technologies and social media in Africa, coupled with emerging investments into big data technology, it is likely that we will witness a rapid, extensive implementation and use of big data analytics in healthcare across the Africa continent as big data analytics becomes an emerging and cost-effective tool in improving global healthcare.

Evidence of this can be seen as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Telecommunication Union (ITU), and the United Nations Technology Innovation Labs (UNTIL), in partnership with Health 2.0 Egypt, launched a data analytics challenge in September 2019 to identify interventions for lifestyle changes that prevent chronic diseases in Egypt.



Telehealth

Telehealth has the potential to bring healthcare within reach of more people. It enables care to be delivered quickly across distances and enables more healthcare professionals to deliver the right care to the right patient at the right time.

In recent years, there has been a rapid increase in the use of information technologies in the health sector and tools such as telemedicine and e-health have been recently incorporated to facilitate access to essential services in North Africa. However, according to a review of the evolution of telemedicine and e-Health in North Africa by De La Torre Diez, I. et al., published in Trends Telemed E-Health, despite their potential benefits in the North African countries, the experience with these systems has been limited, and there have been numerous obstacles, such as doctor shortage and technological barriers.

The authors highlight that the emergence of telemedicine can be seen as an opportunity for national health authorities in North Africa to renew the formulation of medical policies and actions in response to the need of improving health services (such as quality and safety) in rural communities.

In Egypt, one example is the Ain Shams University Virtual Hospital is an institutional telemedicine service provider operating via a "Treat and Teach" initiative, and serving Egypt, Arab countries and the African continent. It aims to provide equitable healthcare to the region in a sustainable model. The service offers medical consultation service to remote areas that are deficient in specialists. Parallel, it provides applied health education for health professionals to yield competent local champions who can operate, at some point, independently their health services.

Meanwhile, in November 2018, Morocco launched the experimentation phase of its telemedicine project. Steered by Société marocaine de télé-médecine (SMT), the project was first deployed in the health centres of Anfou and Imilchil in the Midelt province Zaouïat Ahensal in Azilal province with the aim of

In 2016, WHO and the International Telecommunication Union launched a groundbreaking national programme "mDiabetes" to harness mobile technology to serve diabetic patients in Egypt.

being extended to further sites. With its telemedicine project in rural zones, the result of a partnership between Morocco's ministers of health, interior and national education, as well as medical units under the royal armed forces, the telecommunications regulatory agency and Mohammed VI University of health sciences, Morocco aims to serve 160 rural communities, representing about two million people having difficulties in accessing quality health services.

mHealth

Mobile health is the monitoring and sharing of health information via mobile technology – such as wearables and health tracking apps. The use of mobile devices and wireless technology to monitor symptoms and deliver care allows physicians to make diagnoses quicker and with fewer errors. By embracing mobile health, or mHealth, patients are able to keep track of their own health data in real-time and inform healthcare providers of any abnormalities at the push of a button.

In 2016, WHO and the International Telecommunication Union launched a groundbreaking national programme "mDiabetes" to harness mobile technology to serve diabetic patients in Egypt. While mobile technology-based health and development projects are not new to Egypt, the mDiabetes programme was unique due to its scale. Most countries have been limited to small-scale pilots, which limits the technology's impact and value to public health. But in Egypt, the mDiabetes programme is capable of reaching millions of people.

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North Africa Health

By Informa Markets

North Africa Health is a 3-day exhibition and congress that will take place from 7-9 April 2020 at Egypt International Exhibition Centre in Cairo. The event connects key industry professionals from the region and abroad to meet, learn and do business.

The 2020 edition will host more than 180 exhibitors and 5,000 healthcare providers, medical practitioners, manufacturers, eHealth experts, key buyers, distributors, policy makers and stakeholders from around the world. The event will also highlight 5 key industry areas including Imaging and Medical Devices, Laboratory, SME & Innovation, Medical Tourism and National Pavilion.

Complemented by a diverse range of scientific and educational content, North Africa Health will be hosting a variety of conferences and workshops including ESLM Laboratory Conference (CME-accredited), ESRM Radiology Conference (CME-accredited) and Digital Healthcare Conference.