



ACHIEVING EFFICIENCY IN THE UAE'S HEALTHCARE SECTOR

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H.E. Dr. Mugheer Khamis Al Khaili, Chairman of the Health Authority – Abu Dhabi (HAAD)



Across the globe, governments are working in concert with their nation’s private and public healthcare sectors in order to improve the efficiency of their hospitals and health clinics. In most cases, the principle method of achieving better efficiency is through the adoption of technological means to alleviate the administrative burden on healthcare givers so that they can process, diagnose and treat patients more quickly and effectively.

Electronic Medical Records (EMR), Hospital Information Systems (HIS) digital healthcare conferencing or telemedicine, adopting technological management tools such as these allows for the effective virtualisation and automation of medical administration tasks through electronic connectivity. This remains of vital importance since it can generate billions in cost savings by reducing wasteful processes and lost productivity.

Additionally, while in many industries cost-cutting measures can ultimately reduce the resultant quality of service, in this instance there is no such trade-off. The adoption of EMR and similar technologies enables higher quality healthcare services through swifter and more accurate patient processing, subsequently improving working conditions for healthcare professionals. In short, achieving efficiency through electronic connectivity isn’t purely a cost-savings opportunity; it is fast becoming a healthcare necessity.

UAE Adoption of Technology Efficiency

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“The statistics report and capacity masterplan identify gaps in capacity and make recommendations on how to close them. A key focus of the plan is to provide information that encourages and stimulates investment and innovation in healthcare that will help close the gaps in capacity at both specialty and geographical levels for the benefit of Abu Dhabi residents.” H.E. Prof. Maha Taysir Barakat, Director General of HAAD

Improving health and wellness in the UAE has become the object of increasing government investment in terms of strategic planning as well as resource allocation. Evidence of its heightened importance can be found in the wide-ranging objectives and planned initiatives of HAAD’s 2020 Healthcare Strategy that was launched in December 2014. There are 58 initiatives due to be enacted over the course of the next 5 years, covering the following 7 priority areas:

1. Continuum of Care
2. Improving Quality of Healthcare
3. Attracting and Retaining Workforce
4. Emergency Preparedness
5. Wellness and Prevention of Disease
6. Ensuring Value for Money – Cost-effectiveness
7. e-health

The last two pillars – Cost-effectiveness and e-health – are at the heart of HAAD’s goal to achieve technological efficiency in both public and private healthcare facilities as

part of the overarching objectives of the five year plan. The following sections outline the various Health Information Technologies (HIT) that are currently being implemented in hospitals and health clinics across the UAE in furtherance of the 2020 strategy.

Electronic Medical Records

“The adoption of Electronic Medical Records can generate billions in cost savings while improving healthcare quality by enabling shorter hospital stays prompted by better-coordinated care; less nursing time spent on administrative tasks; better use of medications in hospitals; and better utilisation of drugs, labs and radiology services in outpatient settings.” RAND Corporation ¹

“There is an initiative approved to create electronic medical records all over the emirates so the patients can move seamlessly between private and public hospitals. If you look at each emirate’s efforts, some are faster and some slower. Budgets differ as well. We look at standardising these efforts.” Dr. Mohammad Al Redha, Chairman of Emirates Health Informatics Society

The lack of instant access to a given patient’s accurate medical records has traditionally been a perennial problem for healthcare professionals across the UAE. It can lead to unnecessarily long waiting times for patients, exacerbating their health problems and placing a strain on hospital resources. In the most serious cases it can lead to death or serious injury due to incorrect diagnosis or treatment.

The move towards EMR allows for swift information sharing between healthcare professionals, putting the vital data they need to make the right medical call in their hands without

delay. Not only can EMR save lives and improve the quality of care given to patients, it also represents huge cost savings through the reduction of paperwork, processing functions and redundant or inaccurate record keeping.

The UAE is one of the world’s leading adopters of EMR. As early as 2008 the Abu Dhabi Health Services Company (SEHA) implemented an EMR system developed by Cerner to link their 11 hospitals and 39 clinics in Abu Dhabi.² In 2012, The Dubai Health Authority carried out a survey to determine how far along its hospitals were in their efforts to comply with ENRAM (Electronic Medical Record Adoption Model – the international benchmark to measure a hospital’s attempts to adopt a paperless, digital system). The survey found that almost 70% of the hospitals in Dubai were at the early stages of EMRAM.³

Rating hospitals from stage 0, which means having no electronic medical record system at all, to stage 7 where the hospital applies a totally paperless medical record system, the median score of hospitals in Dubai by late 2014 was 2.5. Progress has been slowed by the large investments required; according to Mohammad Al Redha, Director of Health Data and Information Analysis Department at the DHA, on average a UAE hospital would spend between 2-10% of its budget in order to make the transition.

¹Extrapolating Evidence of Health Information Technology Savings and Costs, RAND Corporation

²Cerner nets EMR install at Abu Dhabi hospital, Health Imaging, 20/08/2008

³DHA and HIMSS complete survey across hospitals in Dubai to determine their electronic efficiency, Dubai Health Authority, 02/12/2012

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Chairman of Emirates Health
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“There were a limited number of health facilities in Abu Dhabi 20 years ago. They were not as technologically sophisticated. All that has changed, there are more facilities and more technologically advanced clinics equipped with latest machines. Now there is an electronic system that allows you to go to different centres without having to open a new file. We receive messages to remind us of our appointments.”

Emirati Fatima Muhammed



However, recognition of the benefits of achieving the later stages of ENRAM have translated into greater EMR adoption efforts across the UAE. Of the 11.6% of hospitals in the Middle East that have reached stage 6, eight of these are located in Abu Dhabi. The prospect of creating substantial annual cost savings is slowly overcoming investment objections too. A recent case study showed that six hospitals in the United States saved a total of \$48.5 million per annum by adopting EMR technology. If a similar performance was achieved in the UAE, it would result in a total saving of at least \$640 million (AED2.35 billion) for the 80+ federal, local government and private hospitals.⁴

Improved Networking Solutions

Accessing medical records in a timely fashion is an essential requirement of healthcare professionals in order for them to carry out their duties in the safest and most effective manner. Therefore, any healthcare facility must feature an ICT infrastructure with a networking solution that can adequately support it. Ideally, the solution will include redundancy and cybersecurity protocols that will allow the facility's network to remain operational under all but the most extreme circumstances.

In July 2014, the Thumbay Group commissioned Huawei – a leading global ICT solutions provider – to develop a LAN network that would link its four UAE GMC Hospitals in Ajman, Fujairah, Dubai and Sharjah.

The aim of the network implementation was to provide better and faster services for its patients while at the same time reducing operational costs. Within weeks Huawei's technology solution reduced the hospital's network downtime by over 70% while increasing its performance across the four hospitals by over 25%.⁵

Hospital staff were able to access their patients' reports much more quickly, enabling faster and more accurate decision making which has translated into faster patient processing, greater customer satisfaction and improved morale for both the healthcare professionals and their patients.

Hospital Information Systems

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A poll conducted in January 2015 found that 64% of Abu Dhabi residents believe health care has improved steadily over the past decade. Of those, 35% feel that the most significant improvements can be seen in the infrastructure of the emirate's hospitals and health clinics. Those facilities that have embraced state-of-the-art, fully integrated HIS have enjoyed heightened performance levels in terms of hospital management, clinical tasks and patient administration.

⁴Paper cuts could save UAE hospitals Dh2.35bn, Emirates 24/7, 28/03/2015

⁵Huawei Makes Huge Impact with Technology Deployment at Thumbay Group's UAE Hospitals, Reuters 02/07/2015

Similar progress can be seen in other emirates. In Dubai, Rashid Hospital serves as a flagship for the smart initiatives of the DHA's Dubai Health Strategy 2013-2025 as it uses a computerised HIS to control all the procedures undergone by patients and to keep track of their medical and personal needs. With integrated EMR, patients as well as healthcare staff can control and view all of their relevant medical information, helping provide patients with high quality treatment and follow-up. In late 2013 the DHA installed Android tablets in the waiting areas and beds of all 14 of its primary healthcare centres to further improve their HIS standards.⁶

Remote Patient Monitoring/ Telemedicine

“Growing medical problems in the UAE are rapidly outpacing the not-insignificant infrastructure that exists to support them – and the solution is not to be found in only building more hospitals, importing more doctors or building more medical schools.” Brian de Francesca, Leading Digital Medicine Proponent and CEO of Ver2

Tele-consulting – the practice of digitally connecting doctors with their patients at home – is rapidly gaining popularity and support in the UAE as growing evidence shows that it can have a significant and sustainably positive impact on treating patients with chronic illnesses from the comfort of their own home. Planning compliance and monitoring progress remotely can substantially reduce emergency visits and decrease care costs for both the patient and healthcare facility.⁷

According to Al Tamimi Head of Regulatory Law Andrea Tithecott, digital medicine is one of the most rapidly growing healthcare sectors and is currently valued at an estimated \$160 billion globally

with a large proportion invested in the GCC. Its growing adoption is of particular importance to HAAD's 2020 Healthcare strategy as the emirate suffers from high rates of chronic diseases related to lifestyle, such as obesity, diabetes, and cardiovascular disease which accounted for 36.7% of all deaths in 2013.⁸ In addition it could markedly improve the cost-effectiveness of current medical service centres in rural areas where transport to and from the facility is problematic.

Improving Healthcare Operations through Technological Efficiency

The integration of these new technological tools and means of assistance will continue to present challenges to the healthcare centres that adopt them. Healthcare professionals routinely handle strenuous workloads that may leave them with little time to learn new methodology. That is why all new technological implementations must consider the doctors and nurses who are the end users and must therefore be entirely user-friendly and easily accessible.

⁶DHA begins move towards smart hospitals, Dubai Health Authority, 08/20/2015

⁷Will the UAE's digital medicine boom steer us away from hospitals?, Al Arabiya, 27/03/2015

⁸Abu Dhabi Healthcare Strategic Plan Announced, HAAD, 24/12/2014

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Another critical consideration in the effective long-term implementation of technological efficiency in the UAE healthcare sector is regulation. Changing medical practices will carry an inherent measure of risk as healthcare professionals acclimatise to the new and unfamiliar systems. Every effort needs to be made to safeguard the patient, their healthcare giver and the facility itself through clear and well-considered regulation of these evolving healthcare innovations in order to ensure that they are properly and safely utilised.

HAAD and other governmental authorities throughout the UAE have already discerned the need for such efforts and accordingly they have produced guidelines and healthcare standards regarding telemedicine, data protection of electronic medical records and remote patient monitoring.⁹ Further regulations regarding healthcare technologies are already being shaped in order to support and encourage innovation in the sector.

Despite valid concerns regarding the cost of implementation, training and the uncertainty of the evolving regulatory process, the potential for Health Information Technology to improve the overall quality and cost-effectiveness of healthcare services in the UAE cannot be overstated. As HIT becomes the subject of burgeoning levels of investment from the public and private sectors, guided and refined by regulatory bodies, its impact on the healthcare sector continues to be felt. Its implementation directly translates into more efficient patient processing, leading to cost savings, greater customer satisfaction and increased revenues for healthcare providers.

⁹HAAD Standards for Tele-consultation in the Emirate of Abu Dhabi, HAAD, 22/03/2015

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To find out more about the latest in the UAE's healthcare sector, don't miss the **Healthcare Efficiency Through Technology (20-21 October 2015, Abu Dhabi, UAE)** developed with input from the region's key project stakeholders including Thumbay Group, Saudi German Hospital, Lifeline Hospital, Oasis Hospital, Ain Al Khaleej Hospital, Canadian Specialist Hospital and more.

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