

# Automation of healthcare system

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In the last few years, following the relative stability of the political, economic, and security environments, Iraq has embarked on a transformation towards an ambitious program of automation across various sectors. However, this automation program faces numerous challenges, including significant investments<sup>1</sup> in technology and training, addressing social impacts, and combating widespread illiteracy. According to UNESCO, literacy is defined beyond its conventional concept as a set of reading, writing, and counting skills. Instead, it is now understood as a means of identification, understanding, interpretation, creation, and communication in an increasingly digital, text-mediated, information-rich, and fast-changing world (1). Furthermore, for such a transformation to succeed, Iraq must develop regulatory and legal frameworks to support and ensure the safe and equitable deployment and handling of private data stored in electronic systems.

<sup>3</sup>One important sector directly impacting people's lives is the healthcare system. Fifty years ago (1970s), Iraq's healthcare system was one of the best in the Middle East. Unfortunately, it has become one of the most dilapidated, ranking 167 out of 195 countries worldwide according to the Global Healthcare Security Index (GHS), 2019 . This deterioration began in the 1980s with the onset of the eight-year war with Iran, followed by the invasion of Kuwait, a 13-year embargo, and subsequent occupation and political instability.

<sup>2</sup>In 2019, the Global Healthcare Security Index (GHS) was developed to rank healthcare systems worldwide. Iraq ranked 167 out of 195 countries worldwide

Two crucial aspects of healthcare system automation are the Hospital Intercom System and the Inter-hospital communication systems.

1. **The intercom system:** This system, often called the Hospital Communication System, helps to facilitate internal communication within the hospital among medical staff and departments, including doctors, nurses, laboratory and radiology departments, local blood banks, pharmacies, and administrative personnel. This system enables the exchange of information between different departments, provides easy-to-reach information, supports rapid decision-making, allows for timely consultations, monitors and follows up on patients, and improves the overall efficiency of hospital operations. It also facilitates authorized personnel to track statistics and check and coordinate hospital resources, especially during emergencies and health crises like epidemics and natural disasters.
2. **Inter-hospital Communication System:** This system connects healthcare providers at different levels, including primary healthcare centers, specialized healthcare centers, small hospitals, and large hospitals, facilitating easy communication, information sharing, and data exchange nationwide. In this system, every Iraqi should have a digital national health ID card, allowing authorized medical personnel to access the patient's comprehensive medical history, including previous medical consultations, admissions, chronic diseases, chronic use of medications, and previous investigations, among other details.

The rationale for adopting an automated national health care system in Iraq encompasses several aims, with the ultimate goal of improving health care services provided to Iraqi citizens. These aims include enhancing standards, efficiency, and delivery of healthcare services and improving overall patient outcomes. Specifically, these aims include:

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1. Improved access to healthcare services, especially in rural and underserved areas.
2. Enhanced healthcare system efficiency includes patient registration, scheduling appointments, billing, and inventory management.
3. Improve health care quality through immediate and accurate access to patient records.
4. The collection, analysis, and management of data obtained from the automated system helps identify trends, monitor public health indicators, predict outbreaks, and implement evidence-based practices for better healthcare management.
5. Patient engagement is ensured through secure access to their health information, appointment reminders, educational resources, and interactive tools for self-management.
6. Resource optimization, including personnel, equipment, and supplies. This will lead to cost savings, improved staff productivity, and better allocation of healthcare resources where they are most needed.
7. The system supports regulatory compliance, ensuring compliance with healthcare regulations, standards, and data privacy requirements. Moreover, systems ensure accurate documentation, reporting, and protocol adherence, thereby reducing compliance risks and enhancing overall healthcare governance.

Recalling the old saying that the journey of a thousand miles begins with the first step, we believe it is time to start automating the health system in Iraq and invest in the Intercom System and the Inter-Hospital Communication System, trying to improve the quality of health care services and bridge or reduce the gap with other countries.

References:

1. UNESCO. <https://www.unesco.org/en/literacy/need-know#:~:text=Beyond%20its%20conventional%20concept%20as,rich%20and%20fast%2Dchanging%20world>. Accessed May 14, 2024.

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