Before and After: Healthcare Users and Professionals Perceptions on Implementation of eHealth Privacy Protection Laws in United Arab Emirates

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Background: United Arab Emirates National Agenda and Dubai Strategic Plan 2021 aims to make the United Arab Emirates among the best countries by providing world-class healthcare in collaboration and partnership with stakeholders of public and private sectors. E-health has become of paramount importance over the last two decades, where the overall reduce the cost of provision of healthcare, improve quality of care, and reduce medical errors. In the United Arab Emirates, Dubai Healthcare City maintains its data protection system (Regulations No. 7 of 2013). The DHCC is a free zone and the healthcare hub of Dubai, where it hosts a group of international healthcare professionals and service providers. If the patients are reluctant or refuse to participate in the health care system due to a lack of privacy laws and regulations, the benefit of the full-fledged e-health care system cannot be materialized. The most significant problem is the protection of patients’ data privacy. Medical records form an essential part of patient management that includes a variety of patient information that might have sensitive patient data. Therefore, the major challenge is maintaining electronic medical records data privacy. Studies to measure user’s perceptions of such technologies are limited in the Eastern Mediterranean region. In February 2019, the President of the UAE issued Federal Law No 2 of 2019 (Health Data Law), which regulates the use of information technology and communications (ITC) in the healthcare sector and the Cabinet resolution no. (40) of 2019 Concerning the Executive Regulation of Federal Decree-Law No. (4) of 2016 on Medical Liability. These laws are the first piece of federal legislation in the UAE that directly addresses data protection principles. The laws introduce familiar data protection concepts such as purpose limitation, accuracy, security measures, and consent to the disclosure, similar to the GDPR.

Objective: The purpose of this study was to investigate the perceptions of healthcare professionals and healthcare users toward an electronic medical record and data privacy in eHealth care facilities in Dubai before and after the law implementation. The dependent variable was the user’s perception, while the independent variable includes gender, nationality, income, and age. The research study investigated the critical characteristics, factors, and highlighted possible issues of e-health privacy in Dubai through the perception of the citizens using e-health care facilities.

Design: This quantitative descriptive study explored electronic medical records and data privacy protection principles before and after the implementation of the law using an online survey as a data collection tool.

Data Source: In the quantitative study, respondents comprised of Health Care Professionals (n=46) and Healthcare Users (n=187) before the implementation of the e-health privacy law and respondents consisting of Health Care Professionals (n=44) and Healthcare Users (n=157) after the implementation of the e-health privacy law across Dubai, United Arab Emirates.

Setting: The data collection for the ‘before’ implementation of the ehealth privacy laws was conducted between April 6 2015 and June 30 2016. The data collection for the ‘before’ implementation of the ehealth privacy laws was conducted between February 6 2019 and July 30 2019.

Population: Healthcare professionals and healthcare users working in Dubai and 2 ehealth privacy laws and policies in the United Arab Emirates.


Results: Before the implementation of the ehealth privacy laws, the survey findings indicated the most significant firstly, the public perception on the medical data collected is recorded accurately and precisely. Secondly, their rights have not been violated, and thirdly, they trust the e-health services systems offered in Dubai. There was found to be no significance difference between the nationality and the privacy data statements. For healthcare professionals, there was a high level of significance for two variables: Disclosure Principle and Enforcement Principle. For the healthcare users, there was a high level of significance for one variable: Security Principle indicating high levels of trust. The policy analysis and impact can be shaped based on the findings to evaluate the success in realizing current strategies and an action plan. The results of the study after the implementation of the ehealth privacy laws showed that most users agreed on the presence of good ehealth data protection practice and privacy principles. There was a relationship between the following demographic variable and the surveyed privacy practice: gender, nationality, and income except for age that had no statistically significant associations with them. This study provided preliminary insights about the perceptions on ehealth data and record privacy in Dubai and linked some demographic variables to the perceptions. Moreover, specific studies on why specific demographics affected the perception of privacy should be done.

Conclusion: The policy implications and recommendations of Social
change for future health leaders and policy-makers across the United Arab Emirates and other Arabian Gulf countries may include more contribution to evidence based research in health; more provision of guidance on new e-health policy and laws in UAE; and continue, on-going contribution to health policy reforms and debates.

Summary Box

What is already known in this topic?

Electronic medical record users may experience serious financial, social, and psychological problems if sensitive information is disclosed. The previous study on privacy perception in Dubai was done in 2015 before electronic medical records implementation at DHA. Privacy protection laws and public understanding of data privacy study, which showed that most of the survey respondents trusted the eHealth care services in Dubai, and they do not feel their data privacy and confidentiality at risk. Moreover, there is limited evidence to indicate of what is known about the current use and attitudes towards electronic medical records and data privacy laws in Dubai.

What this study adds?

For healthcare professionals, there was a high level of significance for two variables: Disclosure Principle and Enforcement Principle. For the healthcare users, there was a high level of significance for one variable: Security Principle indicating high levels of trust. The policy implications and recommendations of Social change for future health leaders and policy-makers across the United Arab Emirates and other Arabian Gulf countries may include more contribution to evidence based research in health; more provision of guidance on new e-health policy and laws in UAE; and continue, on-going contribution to health policy reforms and debates.

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