



The Necessity of Designing and Launching Electronic COVID-19 Vaccination Registry System in Iran



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Dear Editor,

Registry systems are a collection of documents containing uniform information of specific individuals that are collected in a systematic and comprehensive method to achieve predetermined and planned scientific, clinical, or political goals. These structured systems designed to collect data for a particular disease or situation, which can be used to assess the identified events in the target population.¹ Moreover, these systems might be useful to evaluate the quality and cost-effectiveness of health services and to formulate the necessary evidence for policy purposes.^{2,3} A registry system consists of two parts, the core and the supporting process, as shown in Figure 1.⁴

Registry systems can be designed in two forms: (1) traditional pen-and-paper, and (2) electronic methods. Pen-and-paper medical records were used for field survey data collection in the past decades. It costs a lot of money, but it was incomplete, fragmented, difficult to find or read, and needs lots of space for archives and data management is ineffective. Hence, electronic registration systems were presented to solve mentioned problems.⁵

With the onset of the COVID-19 pandemic and the heavy burden on public health and economies,⁶ the global scientific communities have been pushing for vaccine development to prevent this disease. With the development and prescription of various vaccines in different countries, several complications were reported. Although vaccine efficacy has been reported to be 65%-95%, the side effects of COVID-19 vaccine play a key role in public confidence in its acceptance; so that fear of complications is the most important reason for the reduction of vaccinations in various groups.⁷

The long-term side effects of these vaccines are not known exactly; however, few studies have examined short-term side effects, including injection site pain, limb pain, fever and chills, fatigue, headache, muscle and joint pain, as well as nausea and vomiting. Anaphylaxis is a rare and potentially life-threatening complication of the COVID-19 vaccine. Other rare complications include vascular problems for example venous thrombosis, and neurological complications such as Guillain-Barre and encephalopathy.⁷⁻⁹

So far, various electronic registry systems for immunization were designed and launched in Iran.¹⁰ Due to the ambiguities around the long-term COVID-19 vaccine side effects, and the ability to follow up the vaccine receivers, there is a necessity to design and launch an electronic registry system by Ministry of Health and Medical Education of Iran. With following the vaccine receivers and recording their clinical and paraclinical findings and outcomes, as well as early diagnosis of vaccinations' side effects, we can provide a better knowledge for physicians and health policy makers to improve better patient management and future planning. Also, it is recommended to link this electronic registry system to Iran Integrated Health Systems (SIB), Hospitals' Picture Archiving and Communication System (PACS), Health Information System (HIS), laboratories and other private hospitals to facilitate access to related data of vaccine receivers.

Authors' Contributions

All the authors contributed equally to this study.

Conflict of Interest Disclosures

The author declare that they have no conflicts of interest.

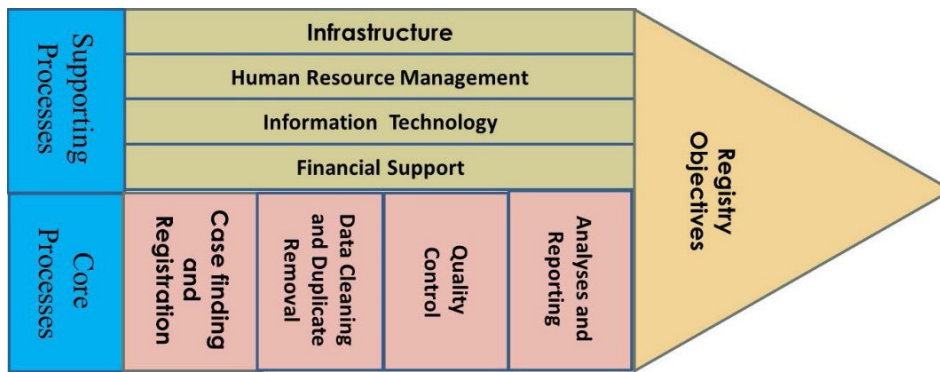


Figure 1. Components of a Registry System (License: CC BY-NC 4.0).⁴

Ethical Approval

Not applicable.

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