

Health Integrated System in Iran: Opportunities and Constraints

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Dear Editor

Nowadays, information and communications technology (ICT) has deeply influenced different aspects, especially healthcare sector.¹ Increasing public awareness and expectations has encouraged healthcare providers to use modern technologies to improve service quality.² Health technologies provide useful information for improving planning, implementing, monitoring, and policy making based on evidence.³ In fact, an electronic health record (EHR) is a digital version of a patient's paper chart. EHRs are real-time, patient-centered records that make information available instantly and securely to authorized users. While an EHR contains the medical and therapeutic histories of patients, an EHR system is built to go beyond standard clinical data collected in a provider's office and can be inclusive of a broader view of a patient's care.⁴

From the beginning of applying family physician and rural insurance program in Iran, different software packages have been developed for making EHR; however, due to technical and structural constraints and also different personal motivations, it is removed from the registration process and recording data in the early stages.⁵

After implementing the health transformation plan (HTP) in 2014, the Ministry of Health and Medical Education (MoHME) launched the health integrated system (SIB) in 2016 with the aim of recording the EHR of households. SIB system follows valuable goals such as applying electronic health record, creating a national health information base, and providing referral systems in the family physician plan. Now, all health workers such as supervisor, general practitioners and dentists, health care providers, midwives, dietitians, mental health and social workers at the first level of service delivery record information on the SIB system. The information that is registered by users on SIB system are as follows: demographic information, disease reporting, physicians' visit, medical history, medications, vaccinations, and radiology and laboratory results.⁶

After four years of SIB implementation at the comprehensive health centers, health centers, and health houses, the significant strengths of this system are:⁵

- Possibility of supervision and direct and online evaluation by all managers in the health system
 - Establishment of a comprehensive EHR system for individuals from birth to end of life
 - Exclusion of the paper and bureaucratic system and quick extraction of health statistics
 - Application of new care guidelines and instant access of users
- On the other hand, constraints of the SIB systems are:

- Extensive data recording and time-consuming nature of service registration in the system
- Absence of proper internet infrastructure, especially in rural areas
- Increase in the possibility of unrealistic data entry by compulsion

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of officials in order to increase service recordings

- Incompatibility of certain system information with community needs and local preferences and specific diseases in each region of the country, and also lack of connection of SIB system information between specialized and sub-specialized centers after five years from the establishment of this system in Iran.

Therefore, for successfully implementation of the system in the health field, it is recommended that we should provide hardware infrastructure, rationalize the number of required services in the system in the first years and then add other services in the long term, hold regular training courses, encourage family physicians as primary caregivers of services at the first level to accept this system, and record the information.⁷

E-health not only could increase the wellbeing of user, but also the pressure on the health care system could be somewhat relieved. By introducing the SIB, we have expanded the toolkit of user-centered design methods for e-health development. The method facilitates easy communication with novices about a future e-health technology, the identification of factors that can hinder or support end-user acceptance of a future e-health technology, and early and cheap possibility for testing functional design decisions.⁸

Authors' Contributions

All authors have contributed in all sections of the manuscript preparation.

Study Highlights

Although Integrated Health System has limitations, by taking some measures, it can be useful for health care system of Iran.

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References

- 1 Khammarnia M, Sharifian R, Zand F, Khademian F, Setoodehzadeh F. Design and localization of computerized physician order entry system in Iran during 2013-2015. *Journal of Rafsanjan University of Medical Sciences.* 2016;15(6):537-50.
- 2 Bawa S, McNab C, Nkwogu L, Braka F, Obinya E, Galway M, et al. Using the polio programme to deliver primary health care in Nigeria: implementation research. *Bulletin of the World Health Organization.* 2019;97(1):24.
- 3 Broomhead T, Ballas D, Baker SR. Application of geographic information systems and simulation modelling to dental public health: Where next? *Community dentistry and oral epidemiology.* 2019;47(1):1-11.
- 4 Mehdipour Y, Ebrahimi S, Khammarnia M, Alipour J, Karimi A. The Acceptance of Mobile Health Services by Physicians: The Case of Iran. *Shiraz E-Medical Journal.* 2018;19(Suppl).
- 5 kabir mj, ashrafian ah, rabiee sm, keshavarzi a, hosseini s, nasrollahpour ssd. Satisfaction of urban family physicians and health care providers in Fars and Mazandaran provinces from integrated health system. 2018.
- 6 Bakhtiari a, takian a, sayari aa, bairami f, tabrizi js, mohammadi a, et al. design and deployment of health complexes in line with universal health coverage by focusing on the marginalized population in tabriz, iran. 2017.
- 7 Khammarnia M, Setoodehzadeh F, Peyvand M, Setayesh AH, Rezaei K, KordTamini A, et al. Evaluation of Integrated Health System Technology Acceptance among the users of Health Centers of Zahedan University of Medical Sciences; Iran. *Evidence Based Health Policy, Management & Economics.* 2019;3(3):154-61.
- 8 AlHamad AQM. Acceptance of E-learning among university students in UAE: A practical study. *International Journal of Electrical & Computer Engineering (2088-8708).* 2020;10.